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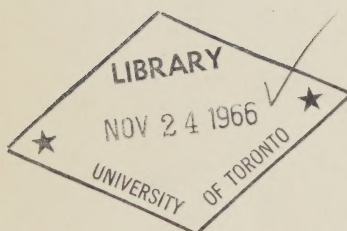
New Brunswick. Labour dept.

[General publications]


[G-1] Employment and manpower
utilization in New
Brunswick.

[General publications]

6-1 **EMPLOYMENT AND MANPOWER UTILIZATION
IN NEW BRUNSWICK
1950 TO 1960**



**A Joint Study Prepared by the
Federal Department of Labour
and the
New Brunswick Department of Labour
1963**



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Forward

A Joint Study Prepared By the Federal and New Brunswick Departments of Labour

The Minister of Labour for New Brunswick wrote to the Minister of Labour requesting a study of unemployment in that province. The Minister of Labour replied that his Department would be prepared to undertake such a study on a joint basis. He stressed, however, that as his Department was particularly interested in co-operating with the provinces in creating winter employment that this aspect of the unemployment problem should be given special attention. This proposal was accepted.

The joint nature of the study was such that the costs were shared equally. Although the original terms of reference set out that this study was basically to be focused on seasonal unemployment in the setting of general unemployment, as the investigation progressed the Committee felt the research and analysis should be broadened in order to view the problem of seasonal unemployment in the larger context of overall employment and unemployment in the province.

The Economics and Research Branch of the federal Department of Labour acted as the directing agency for the study. The research work undertaken by the province was under the direction of the New Brunswick Deputy Minister, Mr. G. G. Saylor.

EMPLOYMENT AND MANPOWER UTILIZATION

IN NEW BRUNSWICK

A Federal-Provincial Joint Committee was established with Dr. W. B. Dymond serving as its Chairman. The composition of the Committee was as follows:

Federal

W. B. Dymond (Chairman), Assistant Deputy Minister,
Department of Labour, Ottawa

G. Schanning, Assistant Director, Economics and Research Branch,
and Chief, Employment and Labour Market Division,
Economics and Research Branch,
Department of Labour, Ottawa.

M. Thompson, Director, National Employment Service,
Unemployment Insurance Commission, Ottawa.

M. J. Macdonald, Director, Economics Branch,
Department of Trade and Commerce, Ottawa.

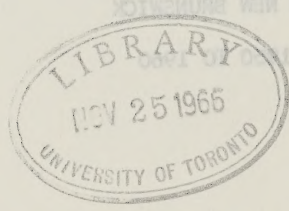
Economics and Research Branch,
Department of Labour,
Ottawa, Canada.

P. J. Donohue, Secretary,
Chief, Research and Statistics Branch,
Economics and Research Branch,
Department of Labour, Ottawa.

A Joint Study
Prepared By the Federal
and New Brunswick
Departments of Labour

EMPLOYMENT AND MANPOWER UTILIZATION

IN NEW BRUNSWICK



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Economics and Research Branch,
Department of Labour,
Ottawa, Canada.

Foreword

In early 1960 the Minister of Labour for New Brunswick wrote to the federal Minister of Labour requesting a study of unemployment in that province. The Minister replied that his Department would be prepared to undertake such a study on a joint basis. He stressed, however, that as his Department was particularly interested in co-operating with the provinces in creating winter employment that this aspect of the unemployment problem should be given special attention. This proposal was accepted.

The joint nature of the study was such that the costs were shared equally. Although the original terms of reference set out that this study was basically to be focused on seasonal unemployment in the setting of general unemployment, as the investigation progressed the Committee felt the research and analysis should be broadened in order to view the problem of seasonal unemployment in the larger context of overall employment and unemployment in the province.

The Economics and Research Branch of the federal Department of Labour acted as the directing agency for the study. The research work undertaken by the province was under the direction of the New Brunswick Deputy Minister of Labour, initially Mr. N.D. Cochrane, and later Mr. G. G. Duclos.

A Federal-Provincial Research Committee was established with Dr. W.R. Dymond serving as Chairman. The composition of the Committee was as follows:

Federal

W.R. Dymond (Chairman) Assistant Deputy Minister,
Department of Labour, Ottawa.

G. Schonning, Assistant Director, Economics and Research Branch,
and Chief, Employment and Labour Market Division,
Economics and Research Branch,
Department of Labour, Ottawa.

W. Thompson, Director, National Employment Service,
Unemployment Insurance Commission, Ottawa.

V.J. Macklin, Director, Economics Branch,
Department of Trade and Commerce, Ottawa.

F.J. Doucet, Secretary,
Chief, Research and Development Section,
Economics and Research Branch,
Department of Labour, Ottawa.

Provincial

N.D. Cochrane, Deputy Minister, Department of Labour,
Fredericton, New Brunswick.

J.A. Paterson, Deputy Minister, Department of Industry and Development,
Fredericton, New Brunswick.

D.W. Gallagher, Economic Adviser to the New Brunswick Government.

G. McAllister, Professor of Law, University of New Brunswick,
Fredericton, New Brunswick.

Changes were made in the composition of the provincial committee over the duration of the study, which included the addition of Mr. G.G. Duclos as Deputy Minister of Labour, replacing Mr. N.D. Cochrane, and the retirement of Mr. D.W. Gallagher from the New Brunswick Government. Mr. Logan and Mr. G.W. Forrester of the New Brunswick Department of Labour were also associated with the study. Representatives from the New Brunswick Department of Education attended a number of the meetings.

The Committee held seven meetings, commencing in April 1960 when the first meeting was convened in Fredericton. At that meeting the Committee discussed the general and seasonal unemployment problem, examined the available statistics, and agreed that some of the questions concerning the problem could not be answered unless original data were obtained through special survey efforts.

As a result, the Committee decided to undertake a sample survey of the population of the county of Gloucester, which is contiguous with the National Employment Service local office area of Bathurst. This area was selected because it is subject to considerable seasonal unemployment.

In addition, a special study was undertaken for the Committee by Professor W. Cunningham of Mount Allison University, Sackville, New Brunswick, on "Occupational Trends and Training Needs in New Brunswick".

The main body of the report is organized around the analysis of the supply of, and the demand for, labour. Difficulties in compiling the statistics, and the lack of adequate current information made it necessary to limit the main analysis of labour force supply and demand conditions to the period 1950 to 1960.

In the Labour Supply section, attention was paid to the characteristics of the population from which the labour force is drawn, including the age and sex distribution, growth and migration. The labour force itself was analyzed as to structure, educational achievement, skills, and adaptability.

In the Labour Demand section, an analysis was made of the trends in the provincial economy as a whole over the decade, and for the individual industry sectors. Estimates of employment were prepared by industry group over the period, using various sources and methods. These are explained in the Statistical Appendix. The Committee is aware of the difficulties involved in preparing these estimates, and the possibility of error, although the results are regarded as sufficiently reliable for most practical purposes.

A third chapter on Unemployment includes a summary of the results of a sample survey of Gloucester County, already mentioned, which covered about eight per cent of the households in the County, and which was designed to provide additional information on the characteristics of the employed and the unemployed. The Committee was also concerned with the status of those who were neither employed nor unemployed, but were of working age. Hence the questionnaire was designed to obtain a three-year employment history. All men with a period of one month or more without employment over the three years, or those with less than one month without employment but who were not employed at the time of the survey, were classified as having a record of 'broken employment'. The only exception made was when the inactivity was the result of illness or a strike. The same criteria were used to classify the women in the sample, but a further stipulation was made that they must have worked for at least sixteen weeks in any one year during the three years immediately preceding the survey date.

The reasons for classifying persons as having a period of 'broken employment' rather than 'unemployment' are discussed in Chapter 3. One of these reasons is worth repeating here. The meaning of the term 'unemployment' depends on the concepts upon which it is based and the methods used to measure it. The current measure of unemployment in Canada is based upon the concept of activity in the labour market. The method used to measure unemployment is a household interview on a sample basis. A person is considered unemployed if he has no job and is looking for one. In small isolated labour markets, where job opportunities are few, large-scale layoffs for seasonal or other reasons tend to reduce the incentive to look for work. Under these conditions some persons may be enumerated as being out of the labour force, and so contribute to low participation rates, rather than to unemployment.

The special survey of the Gloucester County population was carried out during July 1960 by officers of the federal and provincial Departments of Labour. The results of the survey were processed and analyzed in Ottawa. The report of the survey is available from the Economics and Research Branch of the Department of Labour in Ottawa.

A final chapter on Seasonal Unemployment analyzes the seasonal variations in employment, the extent and duration of seasonal unemployment, and the industries affected. Those persons who become seasonally unemployed are also examined as to their occupations, skills and age. A description is included of efforts which have been made to stimulate winter employment, in particular the operation of the Municipal Winter Works Incentive Program.

The main body of the study has been summarized. This Summary, read in conjunction with the Conclusions, will provide a concise account of the findings and the analysis for the reader who may not be in a position to read the whole report.

Since it was necessary to limit the analysis of supply and demand conditions to the period 1950 to 1960, a short current review has been included at the end of the Summary, to bring the analysis up-to-date. This review is based on some of the general economic indicators which are available on a current basis. Generally it suggests that the conditions of the 1950's have not changed significantly.

The research for the Committee was directed by Mr. F.J. Doucet who also is the main author of this report. Mrs. I.E. Johnson of the federal Department of Labour assisted in the research and writing of the report, which was under the general direction of Dr. G. Schonning. The statistical tables were prepared in the Economics and Research Branch under the supervision of Mr. E.W. Johnson; Mr. R. Knowles edited the report.

The Committee wishes to acknowledge the assistance given by the Dominion Bureau of Statistics. In addition to the many special tabulations provided, officers of the Bureau also designed the sample for the labour markets survey. Three senior officers of the Bureau participated in the field surveys as observers and advisers. The Committee also acknowledges the assistance given by senior officers of the various departments of the New Brunswick Government.

W. R. Dymond

W.R. Dymond,
Chairman.

CONCLUSIONS

1. This study has been concerned with the problem of seasonal unemployment in the context of overall employment and unemployment in New Brunswick during the period 1950 to 1960.

2. The paragraphs which follow present the principal findings of the study in summary form and provide the basis for the final section which puts forth some general observations concerning the problem of alleviating New Brunswick's chronic seasonal and general unemployment problem. Reference is made in various places to the relevant part of the main text of the study as an aid to those readers who are interested in more detail.

Some Economic Trends (Chapter II, pp. 1-9)

3. New Brunswick's Gross Provincial Product (measured in constant 1956 dollars to eliminate the effects of inflation) increased by an average of 2.7 per cent per year over the 1950-1960 period, compared with a 5 per cent per year increase in the Gross National Product. Per capita personal income in New Brunswick rose from \$680 in 1950 to \$1,035 in 1960, (+52.2 per cent) while in Canada as a whole it rose from \$979 to \$1,540 (+57.3 per cent). The ratio of per capita personal income, New Brunswick to Canada, averaged about 65 per cent over the decade.

4. The rate of new capital investment over the decade was higher on the average in New Brunswick than in Canada as a whole, when measured as a percentage of gross product (28.3 per cent compared with 23.9 per cent). However, a considerably smaller portion of total new investment went into the private sector in New Brunswick (71 per cent) than in Canada as a whole (81 per cent). A large proportion was spent in the public sector on items which are necessary to provide basic facilities for the province, but which did not, in this case, generate much long-term employment.

Population Changes (Chapter I, pp. 1-3)

5. Between 1950 and 1960, New Brunswick's population increased from 512,000 to 600,000 or 17 per cent compared with a 29.7 per cent increase in Canada. Most of the difference in growth rates was explained by the substantial out-migration from New Brunswick in the face of inadequate local employment opportunities. The rate of out-migration appeared to be closely related to the lack of sufficient job opportunities in New Brunswick and the level of economic activity in central Canada.

Labour Force Trends and Characteristics (Chapter I, pp. 3-10)

6. The total New Brunswick labour force during the period 1951 to 1961 grew by 5 per cent, from approximately 170,000 to 178,000 persons. If personnel in the Armed Services are excluded from this data, then the civilian labour force increased by only 2 per cent, from 167,000 to 171,000 persons. During this same period the Canadian civilian labour force increased by approximately 26 per cent. The male labour force participation rate declined from 79 per cent to 70 per cent, compared with a national decline from 84 per cent to 81 per cent. However, female participation in the labour force showed a sharp increase in New Brunswick, from 19 per cent in 1951 to 25 per cent in 1961, somewhat below the national rate of 29 per cent for women. The increase in the civilian labour force which did take place was the result therefore of the larger numbers of women entering the labour force. The number of male workers actually declined over the period.

7. The trend towards more women entering the work force and higher participation rates for females generally was the result of increasing urbanization and increased demand for female workers, particularly in the trade and service sectors. The absolute decline in the size of the male work force and the decreased participation rates for men was the effect of a relative fall in the demand for male labour, young persons staying in school longer, and older persons retiring younger. To some extent all these factors were present in the Canadian economy, but the impact was more serious in New Brunswick. In addition, because of the lack of employment opportunities, there was a heavy concentration of out-migration among young men.

8. The educational achievement of the New Brunswick labour force as measured by the number of years spent in school was somewhat lower than the Canadian average. Part of the difference was due to the relatively greater concentration of the New Brunswick population in rural areas where educational attainment generally was not as high as in urban areas. Also, relatively greater numbers of New Brunswick workers were employed in the primary industries which have not in the past required much by way of an education. The educational "gap" between New Brunswick and Canada narrowed over the decade with an increase in urbanization in New Brunswick, an increase in school attendance, and an employment shift away from the primary to the service industries.

Employment Changes (Chapter II, pp. 9-30)

9. Total employment in New Brunswick increased from an estimated 155,000 in 1950 to 177,500 in 1960 or by 14.5 per cent. The entire increase was made up of women. Male employment remained static over the decade as a whole.

10. Output from the "goods-producing" sector (primary, manufacturing, and construction industries) increased considerably over the decade but employment declined from 82,400 to 74,100. In the primary industries

total employment fell from 44,000 to 33,000 with sizeable decreases in agriculture and fishing and relative stability in mining and logging, albeit with large intra-decade fluctuations in the latter. Total manufacturing employment declined, both absolutely (from 30,100 to 28,000) and as a percentage of total employment (from 19 per cent to 16 per cent). Within the manufacturing sector itself, significant shifts occurred between the subgroups. Employment increased somewhat in pulp and paper and non-metallic products, and in the "other" manufacturing group which includes petroleum refining and the manufacture of electronics equipment. However, employment remained relatively stable in the manufacture of iron and steel products and in food and beverages as a whole, but declined in fish processing, textiles, clothing, wood products and transportation equipment. Employment in the construction industry rose substantially from 8,300 to 13,100 due in large part to heavy investment in social capital including Camp Gagetown.

11. Employment in the service sector (transportation, communications, storage, public utilities, trade, finance, and service industries) increased from 72,700 in 1950 to 103,400 in 1960; from 46.9 per cent of total 1950 employment to 58.3 per cent of total employment at the end of the decade. All components of the sector with the exception of railway and water transportation shared in the increase but the major expansion occurred in two areas: trade (+6,500) and service (+21,400). The phenomenal growth in the latter was due largely to greatly increased expenditures on defence, health, and education.

Seasonal Unemployment (Chapter IV)

12. The seasonal industries whose activities are strongly affected by climate, namely agriculture, fishing, forestry, construction and food processing, account for a much higher proportion of total employment in New Brunswick than in Canada. Consequently, seasonal unemployment is greater proportionately in New Brunswick. It was estimated that the numbers seasonally unemployed in the winter amounted to 16 per cent of the total New Brunswick labour force, about four times greater than the comparative national figure. Over three quarters of the total winter unemployment in New Brunswick appeared to be seasonal in nature. One of the contributing factors is to be found in changes in seasonal patterns which have disturbed the traditional work arrangements of many rural persons. For example, the logging season has shifted from a fall-and-winter activity to summer-and-fall, and the season itself has lengthened. It is therefore no longer possible to combine logging in the winter with small-scale farming or small-boat fishing in the summer. Moreover, the introduction of larger boats demanding more time at sea makes it impractical to combine fishing and farming.

13. The Gloucester County study indicated that the seasonally unemployed in that County were idle almost twice as long as in Canada as a whole.¹ Seventy per cent of the men with a record of "broken employment"² had non-work periods of five months or more in a year--the average duration of the non-work period was 6.3 months for men and 5.8 months for women.

14. During the fifties, employment in all the seasonal industries except construction declined substantially. Many of the workers who became unemployed in New Brunswick because of these developments tended to go outside of the province for seasonal work during the summer months, returning to their homes in New Brunswick during the winter, where they would be counted amongst the unemployed. Others tended to withdraw from the labour force entirely and to become dependent upon welfare benefits supplemented by an occasional day's work for their livelihood.

15. The study of the Gloucester County labour force strongly suggests, and this is supported by other similar studies, that those with a record of "broken employment" would be only too glad to work during the winter months if they could find jobs suitable to their qualifications in their locality which paid wage rates comparable to those received during the summer months. While some workers left Gloucester County to work in Saint John (the only area in New Brunswick with a relatively high winter employment level) during the winter, the extra expenses involved and the wages paid to essentially unskilled labour did not make this a very attractive proposition. Generally there was not much incentive by way of available jobs for these people to look for work in Gloucester County in winter. This applies equally to much of New Brunswick.

16. While there may have been instances during the decade of workers refusing jobs during the winter months, particularly in logging, it should be noted that the low wage structure of that industry and most seasonal industries makes it difficult for the worker to earn very much more by working during the winter than he can collect in unemployment insurance and social welfare benefits.

17. The amount of seasonal (but not total) unemployment in New Brunswick appeared to decline over the decade as substantial reductions took place in employment in the seasonal industries with the exception of construction. However, persons who have become redundant in the seasonal

¹ It should be pointed out that Gloucester County is not necessarily representative of all rural New Brunswick and it is certainly not representative of the whole province.

² The term "broken employment" means a period without employment which is not the result of a strike or illness. It does not necessarily imply that the person was looking for a job or would necessarily take one if one was offered.

industries usually have very little formal education, and their skills are limited in relation to the needs of other industries. They are therefore unable to move into jobs which become available in expanding sectors.

General Unemployment and Labour Market Adjustment

18. The problems of unemployment and underemployment associated with seasonality of industrial operations were compounded by underlying structural changes in the New Brunswick economy which were discernible during the 1950's. In agriculture, fisheries and forestry, small-scale production by small units has become increasingly uneconomic and uncompetitive in modern markets. The changing organization of these industries is resulting in consolidation into larger production units with more mechanization. This is especially true for the fisheries and forestry sectors. The result is a reduction in seasonality of operations and a higher output per man, but a smaller overall work force and consequent general unemployment from these sectors.

19. The combined effects of the marked shift in industrial employment over the decade from the primary to the service industries, and the organizational changes in the primary sector noted above, are seen in the relatively large underutilization of the labour force. Unemployment for men in New Brunswick was on the average some 60 per cent higher than in Canada as a whole over the period.³ Male unemployment and underutilization were particularly high as evidenced by the decline in male labour force participation rates, the zero growth in total male employment, and the employment decline in the predominantly male primary industries.

20. Serious problems of labour market adjustment were encountered during the decade where the workers displaced from the primary sector often were unable to take advantage of the expanding job opportunities in the service industries. Most of the new jobs were dissimilar to those which disappeared, particularly as to the degree of skill and preparatory education required. Many of the jobs which disappeared were traditionally filled by males, involving manual work mainly and requiring little education or training. The new jobs were frequently of the type regarded as appropriate for women, such as the "white collar" clerical, sales, teaching and health occupations, which usually require more education and training. Moreover, many of the declining occupations were rural-based, while the expanding ones were in urban centres. Consequently, many of the young men who were new entrants to the labour force were unable to find jobs, and emigrated from the province. The older workers continued to try to earn a living in their traditional occupations, but as already noted, many had to leave the province for protracted periods to do so, while their homes and families remained in New Brunswick.

³ See Chapter III on Unemployment, pages 3 ff. for details as to measurement.

The Future

21. Population projections indicate that increases in the New Brunswick labour force in the next few years could be very much greater than in the decade of the fifties. Net labour demand has risen somewhat since 1960, with expansion in shipbuilding, oil refining, mining, pulp and paper, trade, and services more than offsetting the continued declines in agriculture, fishing, logging, and woods products brought about largely by increased mechanization. However, the continued low participation rates relative to the Canadian average and the chronic unemployment problem continue with little sign of an enduring solution. Increased training activity has had a limited beneficial effect on labour market mobility but serious adjustment problems continue to exist, particularly among the older workers. The relatively large under-utilization of labour in New Brunswick in the past has often bred apathy and restrictive and negative attitudes towards mobility, retraining, and education. There is a real danger that these attitudes will continue to be transmitted to the young people of the province unless greater efforts are made to provide adequate job opportunities and to increase labour mobility.

CONCLUDING OBSERVATIONS

22. The seriousness of the imbalances in the economy which were discernible during the decade of the 1950's in New Brunswick and which give every indication of continuing during the decade of the 1960's reflects a trend which is not likely to be reversed unless vigorous and effective action is taken. Three major areas are presented as avenues for corrective action. These are:

- (1) Industrial development, including the encouragement of more efficient operation in existing industry as well as the introduction of new industry;
- (2) The training, retraining and adaptation of both the employed and unemployed labour force to meet changing labour requirements;
- (3) The reduction of seasonal and general unemployment.

Industrial Development

23. Vigorous measures are necessary to promote economic growth in order to increase income levels and employment opportunities. These measures should be directed towards increasing the efficiency of existing industry and further expanding New Brunswick's economic base by encouraging new industry.

24. In view of the small size of the typical firm in New Brunswick and its comparative remoteness from the main centres of commerce and industry in Canada, government could assist in the growth of existing industry by providing technical services respecting production methods, accounting, new products, design, market research, distribution, and other similar advisory work. These programs might appropriately be referred to the Economic Council of Canada, the New Brunswick Research and Productivity Council, the Atlantic Development Board, the Departments of Industry and Labour at both the federal and provincial government levels, and the provincial Department of Education.

25. Intensive and efficient natural resource exploitation is necessary for the balanced development of the New Brunswick economy. Development of this kind is likely to lead to an increase in mechanization, productivity, and output but is unlikely to produce much direct employment growth. Seasonal fluctuations in employment tend to decline sharply in capital-intensive industries as a result of the need for maximum utilization of facilities. Hence, a strong economic base in the primary industries will provide stable job opportunities for a relatively large number of people. In addition, intensive and efficient natural resource exploitation lays the foundation for expansion based on the developed primary resources but arising in the secondary and tertiary areas where expanding labour requirements would tend to reduce chronic unemployment. Persons displaced by technological change and subsequently retrained may thus be absorbed along with the new entrants to the labour force.

26. It is essential that all financial resources be exploited to the full if the necessary expansion and development is to occur. Stimulation of continued expansion in the primary sector of necessity presupposes an adequate attraction for private capital. Hence policies conducive to private investment must be maintained and expanded by the senior levels of government. In the secondary and tertiary sectors increased participation through public (federal, provincial, municipal) in addition to private financial investment is required to produce the needed number of long-term job opportunities.

27. It must be recognized when dealing with the subject of industrial development that many of the factors which could be used to implement a higher degree of industrial and commercial development are beyond the jurisdiction and scope of a single government alone. The necessary action and encouragement becomes therefore a matter of greater flexibility in the policy of government. In this connection the recurring need for policies designed to take cognizance of regional differences seems to warrant recognition.

Training and Retraining

28. Problems of seasonal unemployment, the long-term decline in employment in some primary industries, the increase in the number of the new entrants to the labour force, and the increasing numbers of

workers displaced due to technological change appear to present an extremely difficult "employment"-"training"-"retraining" problem in New Brunswick. These difficulties can only be overcome by an extensive upturn in industrial growth combined with appropriate manpower development and adjustment programs.

29. Before major industrial development can take place, training, retraining, and adaptation of the work force will be necessary to equip individuals for new types of employment. It is most essential that a comprehensive program of training be implemented at the earliest possible time. More vigorous action should be taken to train and adapt the work force to changing job requirements. One of the first prerequisites to any such program is a clear understanding of the kind of training that is required. This necessitates continued research at all levels of government in order to determine the changing requirements of the labour force in the light of trends and changes in the provincial and national economy.

30. One of the major problems in training new workers or in retraining existing workers displaced by social, economic and technological change is the fact that a large percentage of these persons lack the basic education necessary to allow them to take advantage of retraining opportunities. Training of the unemployed and basic training for skill development should be strongly emphasized to enable redundant workers to take advantage of employment opportunities as they emerge in the expanding economy. Full advantage should be taken in this regard of the provisions of the various joint federal-provincial training programs and agreements currently in effect.

31. In view of the changing trends in job skills from the "manual" primary industries to the "white-collar" tertiary activities, there will have to be some reorientation of traditional attitudes towards what constitutes women's work and what constitutes men's work. There could be more emphasis on the job opportunities for men in the expanding occupations associated with nursing, health, the paramedical occupations, teaching, recreation, welfare, clerical and stenographic work, cooking and hairdressing--and on job training programs for men which would qualify them for these occupations.

32. In connection with the problems associated with training and retraining reference must be made to those factors impeding and aiding mobility and social adaptation which are noted in the main body of the report.⁴ For example, where job changes involve geographic movement a lack of funds may prevent it. Governments can be encouraged to recognize and make provision for such re-location in order to utilize its manpower fully.

⁴ Chapter I (pp. 10-18).

33. Of equal or greater importance is the subject of management training and the development of supervisory skills. It is not only the worker who needs new training to adapt to technical, social, and industrial changes. Management is also faced with new competition, new methods, and new products which necessitate more efficient organization and operation if industry is to expand.

Seasonal Unemployment

34. Much of the reason for New Brunswick's successful participation in past years in the Federal-Municipal Winter Works Incentive Program was due to the vigorous sponsorship given to the program at the provincial and federal levels. In order for such a program to be effective it must have the strong and continuing support of senior government officials to whom it is of special concern.

35. Provincial and federal governments can further assist winter employment through the promotion of a policy of maximizing winter employment in the planning of their own development and works programs. Both governments have recognized this in the past and continued emphasis seems desirable in order to alleviate seasonal fluctuations.

36. Tripartite committees of management, labour and government have proven to be effective in discovering possibilities of increased winter employment. Their expanded and continued use should be encouraged.

37. Trends in the provincial economy to date indicate that the great seasonal unemployment fluctuations now existing should decline with greater mechanization and more intensive capital investment in the seasonal industries. Seasonal unemployment fluctuations may be mitigated but not wholly eradicated by a levelling out of the fluctuations in the seasonal industries. If the overall rate of employment growth does not increase, then the New Brunswick economy will suffer from a greater proportion of general unemployment and a smaller proportion of seasonal unemployment than is true at the present time. The seasonal workers who may become displaced from the seasonal industries present a problem of longer-run underutilization of manpower, which will be reflected in increased full year unemployment, heavy out-migration, increased social welfare benefits, and more problems of retraining and re-adaptation.

General Remarks

38. It is evident throughout the study that adequate progress of the provincial economy is prevented or impeded by a number of obstacles which are less evident in most other parts of the country. This situation makes it more imperative on the part of all the authorities concerned to seek out the most effective measures for dealing with these obstacles. More effective liaison between federal and provincial authorities could contribute to meeting such an objective, particularly as they may affect regional policies.

39. To achieve the kind of economic expansion that is believed necessary to bring about adequate growth in employment over the coming decades will require a large measure of imaginative leadership on the part of both federal and provincial authorities and encouragement of similar leadership in both management and labour in the private sector. Much research and experimentation will be necessary. Many old ways will have to be discarded. Thus a climate may be created which would favour the maximum utilization of both the human and natural resources of the province.

SUMMARY

Labour Supply

1. The New Brunswick labour force is increasing very slowly in total, and participation in the labour force by the New Brunswick population is less than the Canadian average. This is the result partly of the out-migration of adults of working age, which affects the age distribution of the remaining population, partly the result of an actual decline in the participation rate of males. The special survey undertaken in Gloucester County indicated that some of the drop in male participation can be explained by the lack of job opportunities. Many workers know that there is no point in looking for jobs for which they are not suitable, and consequently do not get counted as being in the labour force "as without job and seeking work".

2. Between 1951 and 1960, employment of men in New Brunswick remained at approximately the same level, although total employment increased by 12 per cent. This compares with an increase of 16 per cent for men and 24 per cent for both sexes for all of Canada. The increase in total employment was accounted for by women who entered the labour force in large numbers during the decade. The participation rate of women increased from 19 per cent in 1951 to 25 per cent in 1961, which was only slightly below the national average rate at that time, of 29 per cent.

3. An analysis of the difference in the level of formal education between the New Brunswick and the Canadian labour force shows a slightly lower educational achievement in New Brunswick. Part of this difference is the result of the larger proportion of the population living in rural areas in New Brunswick than in the rest of the country, and a larger proportion of the labour force engaged in the primary industries. With respect to the total population, however, provincial levels of educational achievement were approximately equal. The proportion of the population in the 20 to 24 years of age enrolled in vocational and technical courses in 1960 was also approximately the same as the Canadian average. Unfortunately, it is impossible to compare the quality of the skills in the New Brunswick labour force with that of the rest of Canada. The general education of the labour force would suggest that the quality of the New Brunswick labour force is somewhat less than that for Canada as a whole, while the technical education would suggest it is approximately equal.

4. Adaptability An important aspect of labour supply, apart from this general and technical aspect, is its ability to adapt to changing labour market conditions. This aspect of labour supply was examined by the Committee. 'Adaptability' in this sense was defined to include the ability and the willingness of the labour force to make the changes necessary to meet the demands of the economy.

Ability to Adapt. Factors which affect the ability of the labour force to adapt themselves to new jobs are: (1) education and training, (2) the cost of moving, and (3) the availability of housing accommodation. A further factor, the availability of a job, was of course assumed.

5. A very large difference between the educational and skill requirements of the jobs which became redundant and those which expanded during the decade under examination is sufficient evidence to justify the conclusion that during the 1950's the ability of the New Brunswick labour force to adapt to changing patterns of labour demand was impaired by a lack of training and education. Information on the high incidence of home ownership in depressed areas and the general knowledge of housing shortages in expanding areas would suggest that these factors interfered with the adaptability of the New Brunswick labour force. There is also some evidence that the strongest impediment to mobility was the lack of job opportunities, both in the expanding areas of New Brunswick and elsewhere in Canada.

6. Willingness to Adapt. Factors which affect the willingness of the labour force to adapt to changing work patterns cannot all be measured. For purposes of discussion they are grouped into three main categories: economic, social and personal.

7. Economic Factors. These were defined as factors which could be given a money value and comprise income supports, private savings and/or income from other members of the family, and ownership of house and/or land. There is some evidence from the labour market study to suggest that these economic factors could have been significant.

Income supports accounted for a substantial portion of the yearly income of many of those included in the survey and were probably regarded as a normal part of yearly income as periods of unemployment are regarded as a normal part of the yearly work pattern in areas where seasonal industries are important.

8. Although private savings might not deter a family head from moving to a job, they might cause him to postpone his actual move. On the other hand, more than one quarter of the 'unemployed' family heads in this survey had one or more wage earners in the family. The effect of this factor on the individual's willingness to move has never been measured, but it could be substantial.

9. Home ownership can also be a significant deterrent to mobility because similar accommodation in expanding areas might not be available at a reasonable rent. In addition, old homes in declining areas are very difficult to sell. Most rural families included in the survey also received extra income in cash or kind from the land that they owned. This extra income was worth about \$550 per year, and represented about 20 per cent of their income from other sources.

10. Social Factors. These can also affect the willingness to move and would include the society's general attitude towards mobile workers. If the worker has to move where he will find differences in language, religion, educational facilities, he may find it very difficult to adjust.

11. Personal or Psychological Factors. They would include fear as well as ignorance of the new area. Even if an individual does make the move and can perform the new job adequately, he may still have difficulties in adjusting to new working conditions. This would be especially true where there were marked contrasts between the traditional pattern of seasonal outdoor work in the agricultural, fishing or forestry occupations, and the pattern of year-round work inside the factory.

Future Labour Supply

11a. An attempt was made to estimate what the size of the labour force would be by the year 1966. There are two principal difficulties involved in such an exercise, these are: (1) the difficulties of projecting the population,--because it is impossible to predict inter-provincial population movements; and (2) the difficulties of predicting the course of labour force participation rates.

11b. Projections were attempted for males only, since the findings of this study show that it is the male work-force which suffers from the lack of expanding job opportunities, unemployment and under-employment in the provincial economy, not that of the women. It is also extremely difficult to forecast female participation rates. By and large, men remain in the labour force for most of their adult lives, regardless of job opportunities. In contrast, women enter and leave the labour market in response to widening or decreasing job opportunities, and are not committed to a life-time of labour force participation to the same extent as men.

11c. Assuming that out-migration would continue at the same rate as it did between 1956 and 1961, an estimate of the 1966 male civilian non-institutional population was prepared, from which was derived a probable labour force figure for that year of 142,000 males. Assuming the estimates are reasonable, this represents a probable increase of approximately 13,000 males to the labour force between 1961 and 1966, or 2,600 per year. The major part of this increase will come from the youngest age group, 14 to 19 years. In contrast, there was almost no overall growth in male employment between 1951 and 1960.

11d. Even if 2,600 new jobs were created each year in New Brunswick, it does not follow that workers coming into the labour force will necessarily have the required education and training to fill them. However, it is not likely that all of the 2,600 males per year over the next five years can actually be expected to appear in the ranks of the

labour force, either as employed persons or unemployed persons seeking jobs. But unless there is a substantial increase in employment opportunities for men in New Brunswick which is not now foreseen, adjustments likely will take place such that there will be more out-migration, lower participation rates, and a higher incidence of unemployment and under-employment.

Labour Demand

12. In spite of the fact that during the 1950's the population of New Brunswick grew at a slower rate than the national average and that the labour supply grew at an even slower rate than the population, labour demand failed to keep pace. The results were a higher rate of unemployment and a lower participation rate, with the consequent underutilization of the labour force.

13. During the period the New Brunswick rate of growth was only about 55 per cent of the national rate of growth. This slow growth was both a cause of, and a reflection of, the low level of labour demand. It was a cause in that a slow growth rate, or a slowly rising output, could be produced with the same amount of labour because of increases in productivity in some sectors. It was a reflection, because the low level of labour demand coupled with an increasing labour supply led to unemployment and low incomes. This in turn prevented the demand for goods and services from rising as fast as the increase in population.

14. While between 1950 and 1960, the rate of new capital investment in the public sector was higher in New Brunswick than in Canada as a whole,--in the private sector, it was considerably lower. New investment in the manufacturing sector was lower than that for Canada, due largely to the difference in the relative importance of manufacturing in the two economies and the difference in the structure of the industry.

15. While total employment increased by 22,000 during the decade, employment in the 'goods-producing' industries fell by 8,300 and employment in the 'service-producing' sector increased by 30,700. Since the 'service-producing' industries favour the employment of women, the result was a large increase in the employment of women and no increase in the employment of men.

16. There are a number of reasons for the drop in the 'goods-producing' industries. In agriculture, fishing and primary forest operations, changes in market conditions, increases in productivity, and changes in cost-price relationships were responsible.

17. In the manufacturing industries, primary textiles declined as a result of foreign competition, the growth of synthetic fibres, and the inefficiency of existing plants. Employment in the wood products industry declined largely because of increases in the size and efficiency of mills in the rest of Canada and abroad, the increase of other materials as a substitute for sawn lumber in house construction, and the increasing demand for graded lumber. In other manufacturing activities increases in productivity made a larger output possible without a corresponding increase in employment.

18. Total investment per worker in the manufacturing industries was generally lower than that for Canada, reflecting a different structure of industry and probably a lack of profit opportunities as well--attributable in turn to the size of the local market, the distance from the central Canadian market, and basic resource endowment.

19. While employment in construction increased somewhat, it did not increase as fast as in the rest of Canada.

20. The large increase in employment in the 'service-producing' industries resulted in a shift in the demand for labour from manual and relatively unskilled occupations, usually performed by men with little education, to paper-shuffling and service-type occupations, many of which are performed by women and require more training and education. These shifts created problems for the labour force which still face the New Brunswick economy.

Unemployment

21. It is customary to classify unemployment in terms of the cause or origin of unemployment. Five principal categories are normally identified. These are:

1) Structural unemployment which results from the long-term decline in the demand for the products of an industry or from the economic stagnation of a particular area.

2) Technological unemployment which may occur when more efficient methods of production are introduced.

3) Frictional unemployment which occurs when workers change jobs, when workers enter the labour market, or when persons re-enter the labour market after a long absence.

4) Cyclical unemployment which results from periodic changes in the general level of economic activity.

5) Seasonal unemployment, which results from variations in economic activity, and which takes place within the period of a single year because of the weather, annual holidays, customs, etc.

22. The New Brunswick economy, like the Canadian economy, has experienced all these types of unemployment. It is difficult to say to what extent New Brunswick has experienced each type of unemployment since it is much easier to define the various types than it is to measure them. At almost any time and at almost any level of unemployment, the pool of unemployed includes all these various types. In the winter, seasonal unemployment prevails, while in the summer other types of unemployment prevail.

23. It has been estimated that the incidence of seasonal unemployment is about four times as high in New Brunswick as it is in all of Canada. That is, in the middle of the winter seasonal unemployment in New Brunswick represents approximately 16 per cent of the labour force, compared with about 4 per cent for the country as a whole. At the peak of the unemployment in the winters of 1956-1961, male registrations in New Brunswick averaged 39,000. It has been estimated that 28,000, or 72 per cent, were 'unemployed' for seasonal reasons. During the decade of the 50's, registration as a percentage of paid workers was about 60 per cent higher in New Brunswick than it was in Canada. While New Brunswick does not appear to have been affected more severely by cyclical unemployment than the rest of Canada, the general level of unemployment was much higher throughout the decade.

24. Comparisons of the level of unemployment do not give a complete picture of New Brunswick's manpower problems. The low labour force participation by men, the high rate of out-migration and the low income of many persons employed in the primary industries, are equally important. These problems are not visible in the level of unemployment, but some are reflected in the low level of personal income per person.

25. To obtain more detailed information on the characteristics of the labour force in New Brunswick, a sample survey was made of households in the county of Gloucester. Persons in the sample who were in the labour force at the time of the survey, or who had been in the labour force at some time in the previous three years, were interviewed in considerable detail with respect to their work experience. The main characteristics of persons included in the sample are summarized below:

26. The non-institutional population in the sample had a less favourable age distribution in terms of the labour force participation than the Canadian population. While participation in the labour force by men was lower for all age groups, the differences were largest for the 14 to 19 and the 65 and over. The principal reasons are the age distribution of the individual year classes within the 14 to 19 age group and the lack of job opportunities which reduces the incentive to look for work. The first reason is partly the result of differences in the number of children born 14 to 19 years ago, and partly the result of the out-migration of the 18 and 19 year olds. Participation in the labour force is higher among these than among the 14 to 17. On the assumption that boys between 14 and 19 in Gloucester County would normally participate in the labour force to the same extent as boys in the rest of Canada, the number of jobs available in Gloucester County in 1960 was only sufficient to employ about 40 per cent of the boys 14 to 19 years of age.

27. The rate of current unemployment of the labour force included in the sample was 10 per cent, or twice the rate in the Atlantic provinces at approximately the same date.

28. While the sample was not designed to measure changes over time, a comparison of the industrial distribution of the labour force with the 1951 census indicates a considerable decline in the absolute and relative numbers of persons engaged in primary industries. Since there have been no significant increases in employment in other industries, the results are obvious: a) more unemployment and longer periods of unemployment; b) a withdrawal from the labour force by the inexperienced workers; c) a withdrawal from the labour force by older people; and d) an increase in the outward movement of young and better educated persons.

29. Between 1957 and 1960, a number equivalent to 3 per cent of the labour force per year left Gloucester County to find employment outside. Over 90 per cent were under 35 years of age; half of them were males and 90 per cent were single. Fifty-five per cent of them had completed Grade 9 or better and 34 per cent Grade 11 or better. This is above the level of education of the Gloucester County population, although not necessarily better than the young persons who stayed behind at the time this movement took place. In two similar studies in Nova Scotia those who moved out of the areas had more formal education than those who stayed behind. Two thirds of these young people went to Ontario or Quebec. The balance went to other parts of New Brunswick. Only a few went to the United States. One third of these young people had no work experience and the rest did, but improved their skill position by moving.

30. Of the current labour force, 410 males or 44 per cent of the total, and 72 females, or 23 per cent of the total, had experienced at least one month without employment during the previous two years which was not the result of a strike or illness. The incidence of broken employment was 55 per cent in rural areas and 23 per cent in urban areas. Males below 45 years of age had the higher incidence, 47 per cent, than those 45 years and over, 38 per cent. The incidence was highest in fish processing where 91 per cent of the males in the sample who worked in this industry had a record of broken employment. Logging, fishing and construction were next in line with incidence rates of over 75 per cent.

31. Of the men with a record of broken employment, 10 per cent had no formal schooling, 33 per cent Grade 5 or less. About 30 per cent had completed Grade 8 or better and 16 per cent Grade 9 or better.

32. The non-work periods of the men who had experienced broken employment were quite long, averaging over five months. In the fishing industry, 81 per cent of the men with a record of broken employment had had non-work periods of five months or more.

33. Forty-five per cent of the men said they would take additional training, while 38 per cent said they would not. The desire for training increased with the level of schooling. Of the persons with Grade 5 or

less 30 per cent said they would take training, while of those with Grade 6 or more 57 per cent said they would want training. Since the older persons had less education than the younger ones, there was a similar relationship between wanting training and age. Of those who wanted training, three quarters of them identified the occupation and two thirds of these showed motor mechanics, carpentry and welding, and mechanical apparatus occupations.

34. Eighty-four per cent of persons with broken employment stated that they were available for employment during their non-work period. Of these, 60 per cent said they had looked for work. Of those who did not look for work about two thirds of them said that they knew there was no work available or thought there was no work available. The very young and the very old, that is in terms of labour force age, were not as active in the labour market as the middle age group.

35. Of the 410 males in the sample with a record of broken employment, 268 were family heads. Of these, 211, or 72 per cent, owned their homes completely. In the rural areas, the percentage was 84 and in the urban areas 52. Of those who rented, nearly 80 per cent paid \$60 a month or less in mortgage or rent.

36. Twenty-seven per cent of the families had additional wage earners in the family. Forty-two per cent of the families had incomes of \$3,000 or over for the 12-month period preceding the last non-work period examined. Twenty-four per cent had incomes of less than \$2,000. Income per head for these families was very low, \$491 compared with \$1,035 for New Brunswick in 1960 and \$1,540 for Canada. In addition to this income, persons who own land but did not obtain their principal livelihood from owning this land were able to supplement their income either by growing produce for their own consumption or by selling, or both. This additional income averaged \$549 per family for the families who received this income.

Seasonal Unemployment

37. With its present industrial structure and a labour force of about 178,000, it has been estimated that at least 28,000 men are seasonally unemployed in New Brunswick in the winter. This represents 16 per cent of the labour force, compared with about 4 per cent for Canada as a whole. Between 1956 and 1961, it was estimated that the seasonally unemployed accounted for nearly three quarters of the total unemployed men in winter in New Brunswick.

38. There are two principal reasons for the higher level of seasonal unemployment in New Brunswick than in the country as a whole: These are: (1) seasonal industries employ a larger proportion of the total labour force; ~~XXXXXX~~ and (2) the seasonal industries are subject to wider fluctuations in employment. In 1960, the seasonal amplitude in construction in New Brunswick was 41 per cent, compared with 38 per cent for the country as a whole.

39. The reasons for the greater importance of the seasonal industries in New Brunswick are related to the resources of the province and its location. The primary industries are more important to the provincial economy than for the nation as a whole, and both food processing and wood and paper products, which are tied to the primary industries, are a significant part of secondary manufacturing.

39(a) The reasons for the wider fluctuations in seasonal activities are related to the climate and the fluctuations in climate. The presence of ice in the Gulf of the St. Lawrence prevents fishing operations from being undertaken during part of the winter months. This inactivity in turn affects the fish processing industry.

39(b) In construction, the more pronounced seasonality of operations is due not only to the weather, but to the presence of many small firms in the industry itself. Small construction units are more susceptible to seasonal activities, since they are not equipped to undertake winter construction. In addition, the higher expenditures on highway construction during the past several years would have had an effect.

39(c) The seasonality of occupations is determined partly by the seasonality of the industry in which the occupations are found, and the extent to which the occupations are affected by the weather.

40. The seasonally unemployed men are a little older than the average for the labour force, but not very much. The very young, 14 to 19, and the very old, 65 and over, experience less seasonal unemployment than those 20 to 64. There are two principal reasons for this. (1) a large number of young persons looking for work in summer are attending school in winter and hence are not in the labour force; (2) many older persons receiving pensions look for work in summer but leave the labour force in the winter.

41. It is difficult to estimate how long the seasonally unemployed are without work in the winter. In the study of the Gloucester County labour force, nearly three quarters of the seasonally unemployed had non-work periods of four months or more. The average duration was 5.3 months.

Manpower Developments in New Brunswick Since 1960

42. This report has examined in some detail the manpower problems which the New Brunswick economy faced during the 1950's, and attempted to provide some explanation on the causes of the existence of these problems. The statistics which permitted this detailed analysis are not all available on a current basis. Many statistical series used in this report were available only to 1959 and the others to 1960. In a few instances figures from the 1951 census were the most recent available. Since this report was written figures from the 1961 census have begun to appear. Many, however, cannot be compared with data from previous censuses until adjustments are made to allow for changes in classification.

43. It is impossible for the Committee to provide the same detailed analysis of current manpower problems as was done for the manpower problems of the 1950's. This is because the data are not so comprehensive and many are only estimates. However, an attempt has been made in the following pages to provide a more current analysis from the statistics available as to what changes have taken place in labour supply and demand since 1959.

Labour Supply

44. Population Trends in population which were in evidence during the 1950's appear to be continuing into the early 1960's. In 1959 the total population of New Brunswick was 582,000 and by 1962 had increased to 607,000, an increase of 4.3 per cent. Over the same period the Canadian population increased by 6.2 per cent. Since the rate of natural increase in New Brunswick was about the same as the national average, the reason for the slower rate of population increase was out-migration. In addition, in-migration from outside of Canada to the province of New Brunswick was very small, compared with Canada as a whole. The net outflow of population over the three year period 1959-1962 was 10,000, or 3,300 per year. This compared with 4,120 per year between 1950 and 1959. The out-migration continued its concentration among young persons. There was a definite slowing down in the rate of out-migration which partly reflected decreasing job opportunities in central Canada and some increases in job opportunities in New Brunswick.

45. Skills Data from the 1951 census suggested that the New Brunswick labour force was less skilled than the national labour force. Statistics on school attendance and on the general educational level of the labour force by age group, make it obvious that the new entrants to the labour force are better educated than the older workers. Two kinds of training programs have been in operation for some time which have increased the skills of the new entrants and the members of the existing labour force. These are: (1) the vocational, technical and trades training program carried on either in school or as a continuation of the school program; and (2) the training of the unemployed.

46. In 1952-1953 there were 3,600 students enrolled full time in New Brunswick in both publicly-sponsored and privately-sponsored vocational, technical, trade and apprenticeship courses. This represented about 2 per cent of the population 15 to 24 years of age. By 1959-1960 this had increased to 6,456 or about 6 per cent of the population 15 to 24 years of age. The national rate increased from 2 per cent to 7 per cent over the same period. Hence New Brunswick showed marked improvement in relation to the country as a whole in developing the skills of its population through training programs.

47. Since the end of the decade under review, new school building has been stimulated by the Technical and Vocational Training Assistance Act which was passed by the federal Parliament in 1960. Provision was made under this Act for the payment by the federal Government of 75 per cent of the cost of technical schools, trade schools and institutes of technology built or enlarged by the provinces or municipalities. Under this program four new trade schools are to be built at Caraquet, St. Andrews, Bathurst, and in a location in the northwestern part of the province. Major additions are to be made to two of the existing trade schools; and two new combined trade schools and institutes of technology will also be built at Saint John and Moncton.

Labour Demand

48. Investment New capital investment in New Brunswick fluctuated considerably during the 1950's under the impact of large projects like Camp Gagetown and the oil refinery. The trend was up although the rate of investment was lower than for Canada as a whole. In 1951 new capital investment in New Brunswick amounted to \$114 million and by 1959 it reached \$203 million. In 1960 it dropped to \$181 million and by 1961 to \$163 million. In 1962, it increased to \$172 million, and if 1963 investment intentions are realized it may reach \$186 million. It is encouraging to note that the increase is in the manufacturing sector as a result of the planned installation of newsprint and pulp making facilities. All other sectors are either lower than in 1962 or unchanged.

49. Employment 1960-1962 The analysis of employment over the decade of the 1950's showed a substantial increase in the employment of women and very little increase in the employment of men. This occurred because of changes in industrial structure. There is no indication that this situation has changed since 1960. Lack of employment opportunities for unskilled labour in other parts of Canada, together with a strong demand for fishery products halted the downward trend in the fisheries labour force.

50. Employment in manufacturing increased in 1961 and 1962 after a small but steady decline during the 1950's. The employment index for all manufacturing stood at 100 in 1949 and 96.5 in 1960 but last year rose to 103.8. The employment index in manufacturing for all of Canada was 109.5 in 1960 (1949 = 100), fell slightly to 108.9 in 1961 and increased to 113.5 in 1962.

51. On the basis of very limited information, it appears that the increase occurred in food processing, pulp and paper and shipbuilding. It is not known whether employment in the woods products industry continued its decline or not, but since basic conditions have not changed, it is likely that it did. Offsetting these increases were drops in employment in construction and transportation. The index of employment in construction which stood at 85.9 (1949 = 100) in 1960 had dropped to 74.1 in 1962. Similarly the employment index in transportation fell from 92.6 in 1960 to 87.2 in 1962 continuing the downward trend of the 1950's.

52. Employment in trade continued its upward trend with the index rising from 132.8 in 1960 to 136.6 in 1962. The index increased in both the retail and wholesale sections of the industry.

53. There are no published statistics on current employment in the service industry. It seems likely that there was some increase in employment paralleling the increase in the trade industry.

54. In summary, it appears that increases in employment in manufacturing industries were offset by decreases in construction and transportation. This means that the employment of men probably remained static since the only other industries whose labour force is largely male did not increase their labour force. It is likely that employment in agriculture continued its decline. Since employment in the trade and service industries continued to increase and since their labour force includes a large proportion of women, it seems also likely that the employment of women continued to increase.

55. The only encouraging development in the employment picture since 1960 is the increase in employment in manufacturing. Recent developments indicate some further increases can be expected in pulp and paper manufacturing, although some further drop in wood products is possible.

56. Unemployment During the 1950's, unemployment in New Brunswick was considerably above the Canadian average. Generally speaking, the ratio of registrations to paid workers in New Brunswick followed the Canadian pattern. This continued in 1961 and 1962 when the registrations as a percentage of paid workers in both cases were at the same level in 1961 as they had been in 1960; both dropped considerably in 1962. In the case of New Brunswick, the ratio fell from 16.2 per cent in 1961 to 14.5 per cent in 1962, while for the country as a whole the ratio decreased from 11.4 per cent in 1961 to 9.8 per cent in 1962. These are annual averages.

57. Seasonal unemployment does not usually change very quickly from year to year because the factors that determine the level of seasonal unemployment do not change quickly in the short run. Hence, the analysis of seasonal unemployment which covered the period 1950-1960 still applies to the current situation.

CHAPTER I

Labour Supply 1950-1960

The maximum manpower resources available to any economy are determined by the size and age composition of its population and the level of immigration. The quality of these resources depends upon education and training, the attitudes of individuals and the nature of their work experiences. The extent to which these resources are utilized depends in turn upon the level of economic activity and the distribution of this activity among the various industrial and regional sectors.

Population

Growth and Migration Between 1950 and 1960, the total population of New Brunswick increased by 17 per cent from 512,000 to 600,000. Over the same period, the Canadian population increased by 29.7 per cent. Since the rate of natural increase of the New Brunswick population was about the same as the Canadian average, i.e., about 20 per thousand, the failure of the actual population to keep pace with that of Canada is the result of a substantial out-migration. In-migration from outside of Canada to the province of New Brunswick was very small, averaging about one quarter of 1 per cent per year over the decade. In-migration from other parts of Canada could not have been very large, although it is impossible to be definite since there are no data on gross inter-provincial movement of population. What evidence there is, however, suggests that in-migration was very small.

Net out-migration of population from New Brunswick averaged about 12 per thousand during the 1950's, although the rate actually varied from a high of 15 per thousand at the beginning of the period to a negative figure in 1959, when there was a net inflow of people into the province. Between 1950 and 1960 out-migration totalled 39,000. It would appear that the rate of emigration from New Brunswick is closely related to the level of economic activity in central Canada which is the destination of most of the people who moved out of New Brunswick during the 1950's. Emigration to the United States has dropped considerably in recent years.

Information on population by counties is only available for the census dates. It is not possible, therefore, to show from which counties in New Brunswick these migrants came except for the years 1951 and 1956. Furthermore, the extent of intercounty migration is not known. Data from the 1951 and 1956 censuses provide a partial picture of intercounty migration between those two dates.

Note: Detailed tables for Chapter 1 can be found in Appendix A.

Between 1951 and 1956 there was a net out-migration of about 21,000 persons. Between these two dates, ten counties had a net outflow while five counties had a small net inflow of population. These five were: Saint John, Kings, Sunbury, Albert and York. These inflows reflect the growth of metropolitan Saint John, the construction of Camp Gagetown, the growth of the Moncton suburb, and the moderate expansion of Fredericton.

In all, the population of these five counties increased by 1,217, or 0.8 per cent of the combined population of these counties in 1951. The population of the ten counties which had a net out-migration declined by 21,928, or 6 per cent of the combined 1951 population of the ten counties.

With the exception of Westmorland County, which includes Moncton, the counties with net out-migration are rural. The labour force of these counties is therefore engaged very heavily in fishing, farming, and logging. As will be shown in Chapter 2, these industries have reduced their work-force substantially during the decade. Because of this, young persons were unable to find jobs after leaving school, while older persons were being forced out of the jobs they held. Broadly speaking, the migrants were either very young with no work experience or were older with obsolete skills.

Age Distribution While it is not possible to give the age distribution of the emigrants, their influence on the characteristics of different age groups over the period is obvious. One would expect that the emigrants would be mostly of labour force age and that most of them would also be single. In a special study of a sample of the population of Gloucester County,¹ it was found that 92 per cent of the emigrants were between the ages of 14 and 34, and that of these 92 per cent were single. About half of them were men. In three similar studies in Nova Scotia, the emigrants were also very young. A comparison of the age distribution of the New Brunswick population with that of Canada in 1950 and 1960 shows the effects of this out-migration. In 1950, 26 per cent of the New Brunswick population was in the age group 25 to 44 compared with 29 per cent for Canada as a whole. By 1960, this same age group accounted for only 23 per cent of the New Brunswick population while for Canada it still accounted for 27 per cent. Table 1 on page 3 shows additional data on the effects of out-migration on the composition of the New Brunswick population.

Over the same period, persons under 15 years of age increased from 35 to 37 per cent of the New Brunswick population. The result of these shifts was a further reduction in the proportion of the total population of working age from 65 per cent in 1950 to 62 per cent ten years later. Since it is from this group of persons that the labour force is drawn, its size and age composition are among the principal determinants of the size of the labour force itself.

¹ This study will be mentioned many times in this report. Henceforth it will be called the 'Gloucester County Study'.

Table 1 - Percentage Distribution of the Population,
Canada and New Brunswick, 1950 and 1960

Age Group	1950		1960	
	Canada	New Brunswick (per cent)	Canada	New Brunswick
15-19	7.8	8.6	7.7	9.2
20-24	8.1	7.6	6.8	7.2
25-44	28.8	26.2	27.1	23.1
Total (15-44)	44.7	42.4	41.6	39.5

Source: Population Estimates, Reference Paper No. 40, DBS, 1921-1952 and Estimated Population by Sex and Age Group for Canada and the Provinces, DBS, 1957-1960.

The lower ratio of persons of working age to total population has three important effects which affect governments directly: first, it reduces average incomes and hence the tax base; second, it reduces the actual number of taxpayers; and third, it tends to increase the demand for social services. On the other hand, if these people had remained in New Brunswick, many of them would have been unemployed. By moving, they not only relieved the drain on the province's welfare services and the unemployment insurance fund but also provided growing areas of the national economy with their needed services.

During the decade there was also a shift in the distribution of the New Brunswick population between rural and urban residence. By 1960, however, the proportion of the New Brunswick population living in rural areas was still substantially higher than that of the country as a whole, 54 per cent compared with 33 per cent.

Labour Force

Growth and Participation The New Brunswick civilian labour force was about 167,000 in 1951 and had increased by about 2 per cent to 171,000 by 1961. Since this percentage increase was somewhat less than the increase in the population of working age, participation in the labour force dropped accordingly.^{1a} There was, however, a substantial increase in the proportion of women entering the labour force and hence a decline in the participation rate of men. In 1951, only about 19 per cent of the women of working age in New Brunswick participated in the labour force; ten years later, this had increased to 25 per cent, which was somewhat below the national average rate of 29 per cent. There are two principal reasons for this development: (1) the increase in urbanization and (2) the increase in the demand for women workers. This shift in demand, which reflects the expansion of the trade and service industries will be examined in more detail in the next chapter.

^{1a} "Labour force participation" is the term used when referring to the percentage of the population aged 14 years and over who are "in the labour force", - i.e., at work or looking for work.

The extent to which men participated in the New Brunswick labour force declined from about 79 per cent in 1951 to 70 per cent in 1961. The Canadian rate also fell but much less sharply, from 84 per cent to 81 per cent. The principal reasons for the fall in male participation are: (1) young persons stayed in school longer; (2) older persons retired younger; (3) the age distribution of the population became less favourable to labour force participation; and (4) there was a relative fall in the demand for male labour. To some extent, all these factors were present in the Canadian economy, but, for various reasons which will be examined in the next chapter, were less serious than in New Brunswick. In addition, there was a heavy concentration of out-migration among young men.

Men between the ages of 25 and 44 remain in the labour force regardless of economic activity. If they become unemployed they remain in the labour market actively seeking jobs. Between 1950 and 1960, participation by this group remained stable, both in the country as a whole and in New Brunswick. Participation in the labour force by the other age groups is much more sensitive to changes in the level of demand for labour. Since demand for male labour was very slack, participation in the labour force by these age groups declined over the decade.

Educational Achievement In 1951 the educational achievement of the New Brunswick labour force, as measured by the number of years spent in school, was below that of the Canadian labour force as a whole. Only 5.5 per cent of the New Brunswick labour force had completed 13 or more years of schooling compared with 10.3 per cent for the country as a whole. The opposite was true at the other end of the scale; 13.7 per cent of the New Brunswick labour force had less than five years of schooling compared with 7.1 per cent for the national labour force. Part of these differences results from the larger proportion of the population living in rural areas in New Brunswick than in the rest of the country. Persons living in rural areas generally spend fewer years in school than those living in urban areas. This is shown in Table 2 below.

Table 2 - Percentage Distribution of the Labour Force by Years of Schooling, Canada and New Brunswick, 1951

	Years of Schooling					Total
	<u>0-4</u>	<u>5-8</u>	<u>9-12</u>	<u>13-16</u>	<u>17 and Over</u>	
<u>Canada</u>						
Rural	11.4	56.1	27.7	3.8	1.0	100.0
Urban	5.0	36.7	45.3	9.5	3.5	100.0
<u>New Brunswick</u>						
Rural	20.1	54.6	22.7	2.0	0.6	100.0
Urban	6.5	39.4	45.4	6.6	2.1	100.0

Source: Special Tabulation from the 1951 Census prepared by the DBS.

In all of Canada the rural labour force had spent considerably less time in school than the urban labour force, while both rural and urban members of the New Brunswick labour force had spent much less time in school than their counterparts in the country as a whole. While 11.4 per cent of the Canadian rural labour force had spent less than five years in school, the percentage for New Brunswick was 20.1 per cent. At the other end of the scale, while 4.8 per cent of the Canadian rural labour force had spent 13 or more years in school, only 2.6 per cent of the New Brunswick rural labour force had done so.

There was much less difference between the years of schooling of the New Brunswick and Canadian urban labour force, although the national figures were still higher. If one could examine these figures on the basis of the size of urban areas, the differences might disappear. Many small villages classified as 'urban' in the census have essentially rural labour forces and rural educational facilities. There are more of these types of 'urban' centres in New Brunswick than in the country as a whole.

It is probably true that little 'formal'² education is acquired by most persons after they enter the labour force. Some, however, take academic courses through the adult education program. Generally speaking, however, new entrants to the labour force have more formal education than those who retire. It seems probable, therefore, that the educational achievement of the New Brunswick labour force has increased since 1951.

In 1951 persons between the ages of 5 and 24 attending school in New Brunswick accounted for 55 per cent of the total population in that age group, compared with 52 per cent for Canada as a whole. This difference is the result of the age distribution of persons within the broad age group 5 to 24. If allowance is made for this difference, the school attendance rate was approximately the same in New Brunswick as it was in the rest of Canada.

By 1960 the school attendance rate in New Brunswick had increased to 65 per cent. A part of this increase is the result of shifts in the age distribution of persons of school age. The actual increase in school attendance which was not the result of changes in the age structure of population was equivalent to 40 per cent of the total increase. Over the same period the school attendance rate for Canada increased to 66 per cent, of which 38 per cent resulted from factors other than a shift in the age structure of the population.

The number of persons attending institutions of higher learning in New Brunswick represents about the same proportion of the population 15 to 24 years of age in New Brunswick as it does in the country as a whole. Since there are more students from outside New Brunswick

² Formal here means education similar to that received in the regular school system.

attending universities in the province than there are New Brunswick students attending universities outside the province, the above comparison must be adjusted. This was done by the Royal Commission on Higher Education in New Brunswick. The Commission's Report estimated that 3,500 residents of New Brunswick were attending university during the 1961-1962 academic year. This is equivalent to 3.8 per cent of the population 15 to 19 years of age compared with 4.8 per cent for the country as a whole. The number of foreign students attending Canadian universities is approximately the same as the number of Canadian students attending foreign universities, and it is not necessary to adjust the Canadian figures.

Part of the differences in the educational achievement of the Canadian and New Brunswick labour forces can be attributed to the differences in the rural-urban and occupational distribution of these labour forces. Even for similar occupations, members of the New Brunswick labour force had spent less time in school than members of the Canadian labour force. This can be seen in Table 3 on page 7.

In all industry groups except finance, insurance and real estate, a larger percentage of the New Brunswick labour force had less than five years of schooling than for the labour force of the whole country. Similarly, a much smaller percentage of the New Brunswick labour force in all industry groups had completed 13 years of schooling or more.

Of equal importance is the large difference in the educational achievement of the labour force of the various industries. This is equally true in New Brunswick as it is in the rest of Canada. In the province of New Brunswick 22.6 per cent of the agricultural labour force had less than five years of schooling, compared with 5.3 per cent in the service, and 4.7 per cent in the trade, industries. On the other hand, only 17.4 per cent of the agricultural labour force had nine years of schooling or more, compared with 62 per cent in the service, and 59.2 per cent in the trade, industries. This has implications in terms of finding jobs for persons permanently laid off from the primary industries.

Table 3 - Percentage Distribution of the Labour Force by Industry Group and Years of Schooling, Canada and New Brunswick, 1951

Industry Group	Years of Schooling									
	0-4		5-8		9-12		13 & Over		Total	
	Can.	N.B.	Can.	N.B.	Can.	N.B.	Can.	N.B.	Can.	N.B.
Agriculture.....	11.9	22.6	64.0	60.0	22.1	16.3	2.0	1.1	100.0	100.0
Forestry & Logging.....	21.9	34.4	57.2	54.2	18.0	10.5	2.9	0.9	100.0	100.0
Fishing & Trapping.....	32.7	20.5	50.4	59.9	15.5	17.9	1.4	1.7	100.0	100.0
Mining & Quarrying.....	11.1	24.8	49.2	57.4	31.5	16.1	8.2	1.7	100.0	100.0
Manufacturing.....	6.1	13.0	46.6	53.3	39.7	30.6	7.6	3.1	100.0	100.0
Electricity, Gas & Water.	6.6	8.6	38.5	47.3	42.2	37.6	12.7	6.5	100.0	100.0
Construction.....	9.8	14.5	53.1	59.2	32.2	23.7	4.9	2.6	100.0	100.0
Transportation, Storage & Communication.....	6.0	8.1	41.6	48.7	46.0	39.9	6.4	3.3	100.0	100.0
Trade.....	3.3	4.7	32.3	36.1	54.0	54.2	10.4	5.0	100.0	100.0
Finance, Insurance & Real Estate.....	1.0	0.7	11.7	7.1	66.1	80.0	21.2	12.2	100.0	100.0
Service.....	4.2	5.3	29.2	22.7	43.5	46.0	23.1	16.0	100.0	100.0
All Industries.....	7.1	13.7	43.2	47.5	39.4	33.3	10.3	5.5	100.0	100.0

Source: Census of Canada, Vol. IV, Table 19.

Skills The occupational distribution of the labour force is a function of the industrial structure of the economy and of the technology of industry itself. Similar occupational titles may represent entirely different jobs. A farmer on a small subsistence farm using horse-drawn implements and hand tools requires a different set of skills than a farmer on a large mechanized dairy farm. A similar comparison could be made for many other occupations.

The level of skill of an occupation is determined by two general factors: the character of the occupation itself and the training and ability of the person working in the occupation. Since the character of the occupation is itself partly determined by the industry in which it is found, it follows that the industrial distribution of any labour force has a direct effect on its skill level. Furthermore, differences in the ratios of skilled to total workers of the labour force of different regions can partly be explained by the industrial distribution of the labour force within each region.

In 1951 the industrial distribution of the New Brunswick labour force was heavily weighted toward the primary industries and the processing of the products of the primary industries. With the exception of the pulp and paper industry, these industries do not have a very highly educated labour force. The differences in the educational achievement of the labour force of the major industry groups were shown in Table 3. In Table 4 below, similar information is shown for the food and beverage, wood products and paper products industries.

Table 4 - Percentage Distribution of the Labour Force by Years of Schooling in Selected Industries, Canada and New Brunswick, 1951

<u>Industry</u>	<u>Years of Schooling</u>				<u>Total</u>
	<u>0-4</u>	<u>5-8</u>	<u>9-12</u>	<u>13 & Over</u>	
<u>Food & Beverage</u>					
Canada	6.5	47.5	39.3	6.7	100.0
New Brunswick	12.6	55.6	29.6	2.2	100.0
<u>Wood Products</u>					
Canada	11.5	54.8	30.0	3.7	100.0
New Brunswick	18.8	58.5	21.0	1.7	100.0
<u>Paper Products</u>					
Canada	9.0	45.7	36.9	8.4	100.0
New Brunswick	19.7	44.2	29.4	6.7	100.0

Source: Census of Canada, 1951, Vol. IV, Table 19.

The three industry groups have a rather large percentage of their labour force with less than five years of schooling, although somewhat lower than primary industries. Surprisingly, the food and beverage industry has a smaller percentage of its labour force with less than five years of schooling than the other two groups. This is partly because women account for 25 per cent of the work-force and generally have more education. While 14 per cent of the men in this industry had less than five years of schooling, only 9 per cent of the women were in this category.

The skills of the New Brunswick labour force as measured by years of schooling, and allowing for the industrial distribution of the provincial labour force, were below those of the Canadian labour force in 1951.

The next question is, obviously: What has happened since 1951? The increase in urbanization, shifts from the primary to the service industries, and the increase in school attendance has probably narrowed the gap somewhat. Data on enrolment in vocational and technical courses are only available from 1952 on. These, however, show that during the academic year 1952-1953 enrolment in vocational and technical courses in New Brunswick totalled 3,057, or 3.8 per cent of the population 15 to 24 years of age, compared with 33,033, or 1.5 per cent, for the country as a whole. By 1959-1960, enrolment in New Brunswick had increased to 6 per cent of the population 15 to 24 years of age, while for all of Canada, enrolment had increased to about 7 per cent. So far as the number of persons trained is concerned, New Brunswick kept pace with the rest of the country. This does not imply that the number was sufficient, or that the quality of the trainees adequate, to meet the needs of the New Brunswick economy. This problem will be discussed later.

A very small proportion of the labour force is trained through the school system. The majority of workers in semi-skilled, and many in skilled, occupations learn their trade informally on the job, that is, without any classroom instruction. Unfortunately, statistics are not available for enough industries or in sufficient detail to indicate the extent of in-plant training on a provincial basis. What evidence there is suggests that in number at least New Brunswick industries compare favourably with the rest of the country, provided that the differences in the industrial structure of the two economies are taken into account.

There is little direct evidence concerning the quality of the training given in New Brunswick industries compared with the rest of the country. One suspects that, since the New Brunswick labour force has received less formal education and since the technology of some New Brunswick industries is somewhat less advanced than in other parts of Canada, the skill of the labour force would be somewhat lower. The size of the operating unit in most New Brunswick industries is much smaller than in the rest of the country. This is closely interrelated with the industry or firm and must be reflected in the kinds of skills

acquired by workers in these establishments. This narrow range of work experience reduces the mobility of the labour force migration both inside New Brunswick as well as to other provinces.

The Adaptability of the Labour Force

Definition So far, this chapter has been concerned with labour supply in relation to its size, age and sex composition, participation in the labour force, education, training, skill and work experience. Comparisons between the characteristics of New Brunswick's labour supply and those of the country as a whole were made to place the province in the national picture and to explain differences where possible.

No judgment was made or implied concerning the adequacy of the quality of the labour supply of the province or the nation to meet the demand of the economy in the sixties. Increased activity by governments in the field of manpower training, as well as recent public discussion of this problem, indicates agreement on the suggestion that Canada's manpower resources are not adequately trained either to meet current demand or the challenge of the technological revolution which is taking place in Canadian industries.

The Manpower and Social Affairs Committee of the Organization for Economic Co-operation and Development (OECD) recently stated: "Great changes in the economic structure of member countries are to be envisaged during the coming decade in view of competition from developing countries, new patterns of trade policy, and rapid technical progress. A highly adaptable labour force is therefore of great importance for growth; manpower resources should be attracted as rapidly as possible to the most expansive and productive areas." The same problems which face Canada as a nation face New Brunswick as a province. In some respect, industrial changes which have taken place during the fifties have affected the New Brunswick economy much more severely than the rest of the country. This becomes obvious when labour demand is discussed in Chapter 2.

Adaptability in this discussion means the ability and willingness of the labour force to meet the demands of the economy. It implies that new entrants in the labour force be equipped with the necessary basic and technical training to meet the demands of the modern world of work. It also implies that members of the labour force who become redundant in a particular occupation be retrained for expanding occupations. This assumes that all the facilities are available to provide the members of the labour force with the necessary training and guidance to fit them for jobs. If geographical movement is involved, provisions must be made to minimize the financial burden to the individual.

Willingness to adapt here means the individual's acceptance of the extra effort which training or retraining involves, as well as the social discomfort of a new environment. Of course, the individual may need assistance to make the transition.

To quote again from the Manpower and Social Affairs Committee of the OECD: "Countries often accept the burden of large direct or indirect subsidies or protectionist measures to maintain employment for their citizens in declining and low productive sectors. The taxpayers' and consumers' money could often be much better used if it helped workers to cover the cost of moving and retraining for better jobs and occupations. Such expenditure for the improvement of human resources and their reallocation is not a cost to society but a highly profitable investment in adaptation."

Ability to Adapt There are many factors which may affect the ability of a member of the labour force to move to a new job. The following were considered most significant by the Committee: education and training for those job changes which do not involve geographic movement, and education and training plus sufficient money for removal expenses, and adequate housing accommodation in the new location, for job changes which do.

Before discussing the factors which affect the adaptability of the labour force, it might be useful to examine the extent of the mobility of the New Brunswick labour force during the 1950's. Unfortunately, data on mobility are fragmentary. Furthermore, it is not possible to make comparisons between the mobility of the New Brunswick labour force and that of Canada as a whole.

Between 1950 and 1960, net emigration of population from New Brunswick averaged about 1.2 per cent per year. In addition to this outward movement, five counties recorded a net inflow of people from the other ten counties.

In the Gloucester County study, it was found that between 1957 and 1960 a number equivalent to 3 per cent of the labour force per year had left the county. Two thirds of these movers went to central Canada; the rest went to other parts of New Brunswick. The movers were not only involved in a change of location but also in job changes.

Some information is available through the National Employment Service on persons who make job changes through its records on hirings and separations.* However, the data does not give sufficient coverage to be useful for an analysis of job changes within the labour force. It can be seen from Table 7 in Chapter 2, that the number of jobs which disappeared in the goods-producing industries between 1950 and 1960 numbered about 1,000 per year. The number of jobs created averaged about 2,200 and were in the service-producing industries. These figures are net and conceal a large number of job changes. The new jobs were so different in character from the old jobs that it is unlikely that those who became redundant in the old jobs obtained employment in the new ones. What evidence there is

* DBS publishes some data obtained from the operations of the National Employment Service, in "Hiring and Separation Rates in Certain Industries".

suggests that the new jobs were filled by women and young men entering the labour force. Those who left the old jobs either replaced persons who retired from other goods-producing industries, moved away, retired from the labour force or became unemployed.

Education and Training The above discussion on job changes mentioned the disparity between the kinds of jobs for which the demand has been decreasing and those for which the demand has been increasing. Table 3 above shows the educational achievement of the New Brunswick labour force by industrial groups. Nearly one quarter of those in agriculture and fishing had less than five years of schooling, and less than one fifth had completed nine years of schooling or more. On the other hand, the industries in which the demand for labour was increasing, less than 5 per cent of the labour force had less than five years of schooling, while over 60 per cent had nine years of schooling or more.

This was the educational achievement of the existing labour force in the expanding industries in 1951. With new entrants to the labour force having more education, and in a tight labour market where age may also be a barrier, it is not unreasonable to conclude that the education of the redundant workers was inadequate to meet the needs of expanding industries. Furthermore, the number of job openings in New Brunswick was not sufficient to utilize the available labour supply even if there had been a perfect match between the kinds of jobs available and the skills of the existing labour force.

The Cost of Moving It is obvious that even if a person has the education and training and knows of a job to go to in a distant city, it may still not be possible for him to move because of lack of funds. The Government has recognized this and has, through the National Employment Service and other agencies, paid the cost of moving workers. The number of workers who have been helped in this way is very small in relation to the total number who moved.

Unfortunately, it is not possible to say how much it does cost workers to move because so little is known about the distances involved and the means of transportation used. Workers who have automobiles and no dependents can move fairly cheaply. On the other hand, families without automobiles who have to travel an overnight journey by train may find the cost of the journey prohibitive. This is further increased if household effects are included.

In the Gloucester County study, 90 per cent of the movers were single, and two thirds of them had moved to central Canada, mostly in Montreal, Toronto and northern Ontario. The married movers had gone to other parts of the province. Even for those who had gone to Saint John, the cost of moving would be considerable.

The Availability of Housing An important factor to remember in discussing the mobility of the labour force, is that the movement is from declining areas, where housing is relatively abundant and usually cheap, to expanding areas where housing is scarce and usually expensive. Movement in New Brunswick has been from rural areas and small urban centres in the North to the more populous centres of Moncton and Saint John in the South. House ownership is very high in rural areas.

In the Gloucester County study, of the family heads with a record of 'broken employment',³ 70 per cent owned their homes completely. Of the balance, over two thirds paid \$40 or less per month on rent or mortgage.

Keeping this in mind, it is easy to see that lack of housing accommodation for family units could reduce the ability of redundant workers to move even if they had the necessary training, enough money to finance the removal expenses and a job to go to. One must also allow for the payment of one month's rent in advance, a not inconsiderable addition to the cost of moving.

Willingness to Adapt In peacetime, our society does not force members of the labour force to change jobs or to change location. This kind of labour market decision is left to the individual. Society may provide the institutional framework within which those changes can take place, but they will not take place unless the individual is willing to make them.

What then are the factors which may reduce the willingness of an individual member of the labour force to adapt to changing work patterns? Since many of these factors are in the realm of emotions, attitudes and social customs, they are difficult to separate and almost impossible to measure. They are no less real or important for all that, and to omit them from the present discussion would not do justice to their importance.

For the sake of convenience, the factors which the Committee considers affect the individual's willingness to adapt to new work patterns are discussed under three headings: (1) economic; (2) social; and (3) psychological. Their order does not imply an order of importance. Their importance depends upon individual circumstances and only the individual himself can judge. The most that the social scientist can do is observe the behaviour of many individuals in these circumstances and try to detect patterns of response to the various obstacles.

Economic Factors For this discussion, 'economic' refers to those factors which can be given a money value. Only three such factors are included here. These are: (1) income supports; (2) private savings and income from another member of the family; and (3) ownership of house and/or land.

Income supports refer to payments which the individual receives when not working and include unemployment insurance benefits, unemployment assistance, relief, pensions of various kinds, and family allowance. The first three of these income supports are directly tied to the unemployment status of the individual while the others are not.

³ The term 'broken employment' means a period of non-employment of one month or more during a two-year period which is not the result of illness or a strike.

How important income supports are as a factor affecting the willingness of a member of the labour force to move, depends, in turn, upon several other factors. These are: (a) the need of the individual; (b) the gap between the income supports and earnings obtainable from employment; (c) the strength of the other economic and non-economic factors mentioned above; and (d) the individual's assessment of future employment opportunities in his own area.

In assessing the strength of these factors, it must be remembered that in Canada the level of pensions, unemployment insurance benefits and family allowances, are established for an urban society, while the large movements of workers, particularly in New Brunswick, have been, and will continue to be for some time, from rural to urban areas. Hence, what may be regarded as quite inadequate income in an urban centre in central Canada may be considered adequate in the rural areas of New Brunswick.

Furthermore, many rural people are accustomed to working for an annual income, whatever its size, rather than a weekly or monthly wage. Many construction workers and other seasonal workers in urban areas are also accustomed to similar work patterns. They tend to think of a certain annual sum of money as being sufficient to maintain their living standards. When the main source of income disappears, they are not likely to move until they have exhausted all other attempts to maintain their standards on an annual basis.

In the Gloucester County study, the income of the unemployed during their non-work period was equivalent to about 50 per cent of their incomes when working. Since the majority of them worked in seasonal industries, their general work pattern consisted of working only during the period May to December. When winter logging was carried on more extensively, some used to work during January and February. Income supports offset this loss of income and has enabled many persons to maintain their annual income.

There is another way of looking at income supports for persons who experience frequent periods of unemployment, particularly in rural and low income areas. This is to add the income support to wage income. In other words, if some people do think of income in terms of an annual sum received in a discontinuous fashion, rather than a continuous series of weekly sums, then income supports constitute an increase in income and not a reduction. In the Gloucester County study, income supports accounted for nearly one third of the income of persons with incomes ranging from \$1,000 to \$2,999 per annum to about one sixth for those with incomes of \$3,000 and over.

Private savings alone are not likely to impede family heads from moving to a job, although they may enable him to postpone the actual moving date. In the case of a single individual, some private savings plus occasional work in the summer months as well as seasonal benefits in winter can reduce his willingness to move to a location where permanent employment is available.

It is unlikely that, in the low income rural areas where surplus labour exists, the level of private savings will constitute an important obstruction to mobility of labour. It is included here only because, if other factors are reasonably important, then a relatively low level of private saving could act as the 'straw that broke the camel's back'.

Of much greater importance than private savings as a deterrent to the mobility of a family head is the existence of an additional wage-earner in the family. The significance of this factor will depend upon the size of the family, the number of additional wage-earners, their income, the strength of the other factors, and the expected duration of the unemployment period.

The importance of this factor for the community depends upon the number of unemployed family heads with additional wage-earners in the family. In the Gloucester County study, one quarter of the family heads with a record of broken employment had one or more additional wage-earners in the family. At approximately the same date, July, 1960, 140,000 family heads in the whole of Canada were unemployed. In 54,000, or 34 per cent of these family units, there was at least one additional wage-earner. In the Gloucester County study and in three similar labour market studies in Nova Scotia, while only about one quarter of the rural family units where the heads had a record of broken employment at least one additional member of the family was employed; the ratio in urban areas was nearly one third. To the Committee's knowledge, the effect which income from additional wage-earners in the family has on the individual's willingness to move has never been documented. If it is important, it could affect the mobility of, at most, one quarter of the 'unemployed' family heads.

Ownership of a house and land can be both an economic and a psychological, or emotional, factor. The economic importance of home ownership can be measured by imputing a rental value to it or by comparing its value with the cost of renting similar accommodation in expanding areas. Ownership of land can be valued on the basis of the income it produces, either in cash or in kind. Sentimental attachment to the old homestead is also important.

In the Gloucester County study, 84 per cent of the rural family heads with broken employment owned their homes completely. Of the remainder, nearly two thirds paid less than \$40 per month in rent or mortgage. Hence, house ownership, even if allowance is made for taxes, could represent from \$300 to \$1,000 net per annum if valued in terms of the cost of rented accommodation in urban centres in southern New Brunswick or central Canada. Furthermore, landlords rent property to make money and consequently expect their rents to be paid. An unemployed worker with a family might find it difficult to pay his rent and might have to face the possibility of eviction. In any event, he will find that after his rent is paid not much of his unemployment benefits are left for his other needs.

Nor can he sell his rural home or his farm even if he wants to. There is no market for old rural properties, unless they are located near cities. In these cases, the problem does not arise since the owner can commute to the city, as many of them do.

The value of land ownership can also be measured, although there are no published statistics on this. In the Gloucester County study, an estimate was obtained of the value of farm and forest products sold or produced for the use of the family. About 84 per cent of rural families, where the head had a record of broken employment and where the head did not earn his living from the farm or forest, received income in cash or kind from the land. The net value of this income averaged \$550 per family and represented an addition of 20 per cent to the family income from other sources.

Social Factors. There are many factors which can reduce the willingness of members of the labour force to move from one location to another which are related to the organization of society, its institutions, culture, language and attitudes. It is impossible to determine the strength of these social factors with existing statistics. Sociologists in the United States have done several studies in this area but, generally speaking, the results are now conclusive. They do tend to suggest the importance of individual social factors in isolated cases. Labour market analysts have assumed that social factors play an important role determining labour mobility but have not been able to document its importance.

It might still be useful to examine more closely what some of these factors are and how they might affect mobility. For convenience, they are grouped under the following headings: (1) attitudes of society towards mobility; and (2) cultural problems.

It is difficult to say what society's attitudes towards mobility are. At certain periods in Canada's development, there were large movements of people from one part of the country to another. Such strong economic incentives were at work that it is difficult to know what society's attitudes were towards this movement. It is true that considerable glamour was attached to the development of the frontier and the cry of: 'Go West young man' was heard in the fishing villages of New Brunswick. It must be noted that the 'young' was emphasized and was more by way of giving advice to young men on their careers than to convince established family men to seek new horizons.

Even today it is difficult to judge society's real attitude towards mobility. One often reads in the press strong views about the lack of mobility of the labour force. Usually these views are expressed by professionals who see mobility as a means of improving the allocation of labour thereby reducing unemployment and increasing incomes.

In a study on labour mobility, prepared by the Canadian Labour Congress for the Royal Commission on Canada's Economic Prospects, the attitude of society towards the mobile worker is discussed briefly.

"The good citizen is portrayed as one who takes great pains to raise and educate his family, participates in community affairs, is interested in his civic Government, owns his own home and generally integrates himself into the general and constructive life of his locality. In other words, the good citizen tends to be an immobilized worker."⁴

This may be less important in rural areas where outward mobility is continually taking place. Limited employment opportunities and the existence of large families have made mobility essential for survival. While other factors may be very strong, it is unlikely that society's attitudes are an important deterrent to mobility from rural to urban areas.

Differences in the culture of the old areas and the areas in which new jobs are available may either deter a worker from moving, or if he moves, may make it difficult for him to adjust in his new surroundings.

Some of these differences in culture are associated with language, religion, education and training. It may be extremely difficult for a worker to adjust to his new job and even harder for his wife to adjust to her new social environment if a language barrier exists. If superimposed on this difficulty, the new location does not have facilities for worship in the worker's chosen religion, or if the schools do not provide the kind of education he thinks his children should have, the higher scale of living which his new job affords him may lose much of its importance.

How significant are these factors in the New Brunswick economy? Unfortunately, it is not possible to measure their importance. Experience with actual cases in New Brunswick would suggest that simply providing people with the necessary training and moving them to new jobs in new areas does not ensure that they will stay in these jobs. It is not possible to say what the reasons were except that they were not economic. In one case, the workers concerned were French-speaking Roman Catholics who were moved from the rural north to the urban south among English-speaking Protestants. In the other case, there were no differences of language or religion but, otherwise, similar problems existed.

Since internal labour mobility in New Brunswick will continue to be from the rural north to urban south for some time to come, some of these cultural problems may assume even greater importance. The problems may become less important when the new workers establish a social group of their own and provide a link with the cultural activities of the old area.

⁴ 'Labour Mobility': a study prepared by the Canadian Labour Congress for the Royal Commission on Canada's Economic Prospects.

Superimposed on all the economic and social factors which may reduce the willingness of workers to move to new jobs in new areas are personal problems of adjustment. These may take various forms such as: (1) fear of not being able to make the adjustment; (2) ignorance of what the real conditions are in the new area; (3) fear of being considered a failure for leaving; and (4) inability to make the adjustment because of different working conditions.

No matter how depressed an area is, there are always some people with jobs. Hence, a worker who cannot find a job in his own area may be looked upon as not very competent. The situation may even be worse if the principal industries in the area have seasonal operations. The same workers laid off in the fall do not have to be hired in the spring. This means that even if a man is unemployed part of the summer and the whole winter, he may be taken on in the spring. Hence, he may stay around and take his chance rather than admit defeat and move.

The worker may also be ignorant of conditions in the new area and may not be prepared to take the risk of going to a new job which, while trained for, he may not be able to hold. He may be afraid of becoming unemployed in a strange area where the real value of income supports may be considerably less than it was 'back home'.

Even if the individual has made the move and his performance on the job is quite acceptable, he may still have difficulties adjusting to his new working conditions. A man who has been working in agriculture, fishing or forestry on a part-year basis may find it difficult to adjust to year-round employment. The noise of a factory where the machines and the foreman set the pace and method of work represent a striking change to his previous work experience. He also has been used to working in the daytime only and may now have to work shift work. He may be able to adjust to all the physical conditions but may find it impossible to get used to having somebody telling him how and when to do everything.

Labour Force Projections for New Brunswick, 1966

There are two principal difficulties involved in projecting the labour force. These are: (1) the difficulties of projecting the population because it is impossible to predict interprovincial population movements; and (2) the difficulties of predicting the course of participation rates.

The projections attempted here are for males only. One of the reasons for not including females is the great difficulty in forecasting the future size of a female labour force. By and large, men remain in the labour force for most of their adult lives regardless of job opportunities. In contrast, most women enter and leave the labour market in response to widening or decreasing job opportunities, and are not committed to a life-time of labour force participation to the same extent as men. To estimate the future size of the female labour force would necessitate making certain detailed assumptions about future industrial growth and changes in job opportunities, which cannot be done here. What can be stated, however, is that there is not much likelihood of a general shortage of female labour arising in the next few years, although there may be shortages in certain occupations.

Moreover, the findings of this study show that the lack of expanding job opportunities, unemployment and under-employment are characteristics of the provincial economy which affect the male work-force, not that of the women. This being the case, it is important to have some notion of the size of the male labour force which can be anticipated, in order to devise appropriate policies for employment and labour market adjustment.

Accordingly, two estimates of the 1966 male population were prepared. The first estimate was based on the assumption that no out-migration of New Brunswick males would take place between 1961 and 1966. The second estimate was based on the supposition that out-migration would continue at the same rate as it did between 1956 and 1961.

To project the population, ten-year survival rates were applied to the 1956 census population. In other words, all males four years of age and over were aged ten years to give the total male population 14 years of age and over for 1966. To arrive at the civilian non-institutional population, an estimated number of men in institutions, on Indian reservations and in the armed forces were subtracted from each age group. These figures were provided by the Dominion Bureau of Statistics.

The first estimate, assuming no out-migration took place, indicated that the New Brunswick male civilian non-institutional population 14 years and over would be about 211,000 by June, 1966, compared with about 186,000 in June 1961. The second estimate, assuming continued out-migration, would give a male population of 204,000.

To arrive at an estimate of the size of the male labour force for 1966, it was necessary to make certain assumptions about participation rates. Generally speaking, the participation rate for men in the age groups 25 to 44 and 45 to 64 does not change very much over time. The rate for the younger age group 14 to 19 is affected by many factors such as school attendance, age distribution within the group, out-migration, the availability of jobs, etcetera. Over the past two decades the rate for this group has been dropping. With the building of four new trade schools and two combined trade schools and institutes of technology now in progress in New Brunswick, and an increasing emphasis on further education for youth, the pull of the school system is likely to reduce the rate even further. Similarly, the rate for men 65 and over is affected by changes in retirement age, the availability of pensions, job opportunities and other factors. The rate for this group has also been falling.

These two groups together accounted for about 30 per cent of the male civilian non-institutional population 14 and over in New Brunswick in 1961. Hence, any change in their participation rate is immediately reflected in the size of the total male labour force.

Male participation rates were forecast by age group for the whole of Canada for 1966, on the assumption that a 4 per cent unemployment rate would prevail at that time. Participation rates were then obtained for Canada and for New Brunswick from 1961 census data. It was assumed that the ratio between the New Brunswick and the Canada participation rates for 1961 would remain constant over the next five years. This ratio was applied to the 1966 estimates for Canada, in order to obtain participation rate estimates for New Brunswick for 1966.

If these rates are applied to the first estimate of the population of 211,000, which assumes no out-migration, the result is a labour force estimate of 147,000 males.

If these rates are applied to the second population estimate of 204,000, based on the assumption that out-migration continued at the same rate as between 1956 and 1961, the result is a labour force estimate of 142,000 males.

As preliminary population estimates for June 1962 indicate a continuing out-migration at a similar rate to previous years, the second population estimate would appear to be the more realistic one. This means that there would be an addition of approximately 13,000 males to the labour force between 1961 and 1966, or 2,600 per year. In contrast, there was almost no overall growth in male employment between 1951 and 1960. (It might be noted here that the New Brunswick participation rates for males are lower than those for Canada for all age groups in the population. If, therefore, the provincial rates were raised to national levels, the anticipated increase to the male labour force would be even greater than that estimated here.)

The major part of this increase in the labour force will come from the males in the youngest age group 14 to 19 years. Even assuming continued out-migration at the same rate which has prevailed in the past, it was estimated that this part of the civilian non-institutional population would increase by approximately 16 per cent. This does not mean that all of the 2,600 males per year over the period 1961-1966 can actually be expected to appear in the ranks of the labour force, either as employed persons or unemployed persons seeking jobs. But unless there is a substantial increase in employment opportunities for men which is not now foreseen, adjustments likely will take place such that there will be more out-migration, lower participation rates, and a higher incidence of unemployment and under-employment.

CHAPTER II

Labour Demand 1950-1960

The level of employment is dependent upon the level of aggregate demand for goods and services. There is no reliable automatic mechanism which ensures that aggregate demand will always be at that level necessary to maintain full employment no matter how full employment is defined. Given a certain level of aggregate demand for goods and services, the labour force required to produce these goods and services depends upon the existing industrial organization, the production functions of various industries, the skill of the labour force, the efficiency of capital, the resourcefulness of management, and the availability of natural resources. In an economy where goods are sold abroad and goods are bought from abroad, the foreign balance has important implications for the level of employment.

Aggregate Demand and Production

For a national economy, the level of aggregate demand can be estimated and represents national expenditures on goods and services, with proper allowance made for the foreign balance. Unfortunately, for an individual province statistics do not permit the calculation of a similar estimate. There is no information on interprovincial shipments of goods and services, and it is not possible to distinguish between income paid to residents of a province and income paid to residents of another province. This is unfortunate because an estimate of the level of aggregate demand for the province of New Brunswick might help to explain some of the differences in the levels of employment between this province and the rest of Canada.

Several attempts have been made to estimate the provincial equivalent of the Gross National Product. Since these estimates all began with personal income, which represents nearly three quarters of the value of total output, the results are all approximately the same. While the methods of preparing the estimates can be questioned on technical grounds, the results are sufficiently reliable to give rough index of economic growth through time.

Between 1950 and 1960 New Brunswick Gross Provincial Product¹ in constant (1956) dollars increased by an average of 2.7 per cent per year compared with a 5 per cent increase for the Gross National Product. To put it another way, during this period the New Brunswick rate of growth was only about 55 per cent of the national rate of growth.

About 75 per cent of the items which constitute aggregate production are also included in the estimate of personal income, which is available on a provincial basis. Table 5 on page 2 compares personal income in New Brunswick and Canada for the period 1950-1960.

¹ See Table 29, Appendix B, for figures.

Table 5 - Personal Income, Canada and New Brunswick, 1950-1960

Year	Total Personal Income			Personal Income Per Person		
	Canada	New Brunswick	Ratio of N.B. to Canada	Canada	New Brunswick	Ratio of N.B. to Canada
	\$ million	\$ million	Per Cent	\$	\$	Per Cent
1950	13,428	348	2.6	979	680	69.5
1951	15,824	383	2.4	1,130	742	65.7
1952	17,395	406	2.3	1,203	772	64.2
1953	18,336	414	2.3	1,235	777	62.9
1954	18,421	435	2.4	1,205	806	66.9
1955	19,738	450	2.3	1,257	823	65.5
1956	21,885	497	2.3	1,361	895	65.8
1957	23,191	513	2.2	1,398	908	64.9
1958	24,702	541	2.2	1,449	938	64.7
1959	26,319	580	2.2	1,509	983	65.1
1960	27,442	621	2.3	1,540	1,035	67.2

Source: National Accounts, Income and Expenditures, 1926-1956 and 1960, Dominion Bureau of Statistics.

Personal income is made up of the following items: wages, salaries and supplementary labour income, net income received by farm operators from farm production, net income of non-farm unincorporated business, interest, dividends and net rental income of persons, military pay and allowances and transfer payments. Wages, salaries and supplementary labour income account for nearly two thirds of total personal income. It follows that the level of wages and the ratio of wage-earners to total population are the principal determinants of personal income per person.

In June 1960 the number of persons employed in New Brunswick was estimated at 177,500 and the population was 589,000. Hence the employed represent 30.1 per cent of the total population, compared with 33.9 per cent for the whole country. The reasons for this difference were discussed in Chapter 1.

The lower ratio of workers to total population explains part of the difference between personal income per person in New Brunswick and Canada as a whole. Over the whole period 1950-1960 personal income per person in New Brunswick averaged 65 per cent of the national average, while personal income per worker averaged 78 per cent.

Over the period 1950-1960 personal income per person in New Brunswick increased by 50.2 per cent compared with 57.2 per cent for the country as a whole. Personal income per worker in New Brunswick increased from \$2,245 in 1950 to \$3,452 in 1959, or 53.8 per cent, while the national average increased from \$2,824 to \$4,348, or 54 per cent. In 1950 personal income per worker in New Brunswick was 79.5 per cent of the national average. By 1959 the relationship was still the same.

"Transfer payments"¹ made by governments to the individual increased faster in New Brunswick than for the country as a whole. Since these payments are included in personal income, they affected the level of personal income and were responsible for maintaining the ratio of personal income per worker in New Brunswick to the national average. Personal income per worker increased by 54 per cent between 1950 and 1959. Without the transfer payments it would have increased by 44 per cent.

Investment

Direct and Indirect Effects The size and composition of investment expenditures have important direct and indirect effects on the level of employment.

The direct employment effects in this context refer to the amount of employment required to put the physical capital in place. It might take the form of a new building, new machinery and equipment or the repair of existing capital stock. How much employment is created depends on the kind of building constructed and the kind of machinery and equipment included.

Some idea of the differences in the amount of employment provided by different types of construction projects can be obtained from four studies undertaken in the United States in 1959-1960. A summary of both the direct and indirect employment created by four different types of construction projects are given in Table 6.

What is interesting in the comparison is not so much the differences in man-hours required per \$1,000 of contract for the four types of construction but the small proportion which represents direct on-site labour, slightly less than 40 per cent. Whether these figures are applicable to New Brunswick is not known but one would expect the ratio to be similar.

¹ Government transfer payments are payments of money for which no goods or services are rendered in return. They include such items as old age pensions, children's allowances, unemployment insurance, and the like.

Table 6 - Number of Man-Hours per \$1,000 of Contract on Four
Types of Construction in the U.S.A. in 1958-1960

	Number of Man-Hours per \$1,000 of Contract			
	Office			
	<u>Schools</u>	<u>Buildings</u>	<u>Hospitals</u>	<u>Highways</u>
<u>Total Man-Hours</u>	212	227	223	219
<u>Direct</u>	84	97	89	94
Construction On-Site	84	97	89	94
<u>Indirect</u>	128	130	134	125
Construction Off-Site	10	10	11	5
Manufacturing	78	79	79	60
Transportation	8	9	9	15
Trade and Service	20	20	22	13
Other Industries	12	12	13	32 ^(a)

Source: "Labour Requirements for Federal Office Building Construction", U.S. Dept. of Labor, and three other bulletins in the same series.

(a) Of these, 23 hours were in mining.

Investment in machinery and equipment requires less direct labour than the construction of buildings. In many instances the only direct labour required is that involved in unloading the equipment from the transport.

Investment creates employment indirectly through: (1) the suppliers of direct goods and services; (2) the multiplier effect of investment on incomes; (3) the demand for labour necessary for the operation, repair and maintenance of the new capital; (4) the demand for permanent services, e.g., insurance, finance, etc.; (5) the improved general environment for further investment.

In Table 6 only the first kind of indirect employment effect is included. Even this is fairly substantial, accounting for 60 per cent of the man-hours required for every \$1,000 of construction contract.

Investment in New Brunswick creates employment not only in the province but elsewhere. What proportion of this employment takes place within the province depends upon the nature of the investment. Most of the on-site labour in a construction project is usually provided by the local labour force. How much of the indirect employment is provided by the New Brunswick labour force depends upon the items involved. At one time nearly all the wood which went into buildings was local product but with the introduction of plywoods, this is no longer true. In addition, light metals and precast concrete have replaced wood to some extent; these products are not manufactured extensively in New Brunswick.

It is difficult to say without a closer study of the construction industry, but in 'building and structures' the provincial labour force probably does not provide more than one third of the indirect labour required. In highway construction, it is probably closer to half. This is because a large part of the materials used in highway construction can be provided by local industries. In 1949 imports accounted for less than 4 per cent of the value of inputs into the construction industry for Canada as a whole. For New Brunswick, however, shipments from other provinces constitute an 'import'. Since nearly all the plywood, roofing, and hardware are purchased from other provinces, the 'import' content of investment in construction is substantially higher than for the whole country. How much higher may soon be known when an interindustry flow table for the New Brunswick economy is available. This is a project which is being undertaken by the Atlantic Provinces Economic Council.

Investment also creates employment through its effect on incomes. This is called the 'multiplier' effect. Its size depends upon the proportion of the additional income which is consumed, which economists call the marginal propensity to consume, and the extent to which this additional expenditure is on foreign goods, or the marginal propensity to import.

Attempts to measure the multiplier for aggregate investments have not been successful. Reading the economic literature one gets the impression that the investment multiplier is quite large probably between 2 and 5. More recently, statisticians and economists have computed an investment multiplier for various sectors in Canada and results suggest a figure of about 1.25. It is slightly lower in those sectors which have a high import leakage, say machinery, and higher in those sectors which have a low import leakage, say, government expenditure and housing.

Neither the size of the multiplier nor the size of the 'import' leakage are known for the New Brunswick economy. Even if these were known it would not tell the whole story. What happens to an increase in income arising from the multiplier effect of investment on incomes also depends upon the pattern of consumption at the new income level. The more of the additional income spent on goods and services produced locally, the larger the multiplier and vice versa.

Investment also creates jobs of a more permanent nature. How many jobs depend upon the nature of the physical capital put in place. If the new capital is labour-saving, it will cause a net reduction in the number of jobs required to produce a given output.

Furthermore, there is a large difference in the investment per worker among the various industries. Between 1950 and 1960 average annual capital expenditures in the manufacturing industries varied all the way from \$6,085 per worker in the manufacture of petroleum and coal products to \$95 per worker in the leather products industry. This calculation was made by taking average annual capital expenditure and dividing it by the average annual number of workers in the industry.

Under the federal Government's double depreciation program, applicants are asked to estimate the number of jobs created by the new investment. By the time the Government had received applications totalling \$105 million, the estimated permanent jobs created by this investment was about 1,900 or \$55,000 per job created. The variations were extremely high, from \$600 in one case to \$267,000 in another and both these extremes were in the same industry, the manufacture of chemical products.

The above figures show the differences in investment per worker in the manufacturing industry. In 1962 capital expenditures in the manufacturing sector accounted for only 18 per cent of the total for the whole country and 12 per cent for New Brunswick. Of much greater numerical importance are the capital expenditures made by institutions and government departments. These two together accounted for 30 per cent of total capital expenditures in New Brunswick in 1962, while capital expenditures made by public utilities were nearly 20 per cent of the total.

The number of permanent jobs created by the investment in a large hydro development or an automatic telephone exchange may be insignificant in the former case and negative in the latter. This will be true if the automatic exchange replaces the human operators. Indirectly, however, these new facilities may attract other industries which require those services. These facilities form what is commonly called the 'infra-structure' of an economy.

This is true also of institutional and government investment. The labour force required to staff a hospital and that required to staff a church are quite different in size for the same amount of capital expenditures. Housing requires even less than either hospitals or churches. Single unit dwellings do not require any labour for their operation and not a great deal for repair and maintenance. Multiple units require janitorial services and not much else.

What has been said above in relation to permanent jobs created by investment also applies to the creation of permanent demand for services. It is impossible to measure the numbers of jobs created as a result of the increase in the services required by the new plant. In a

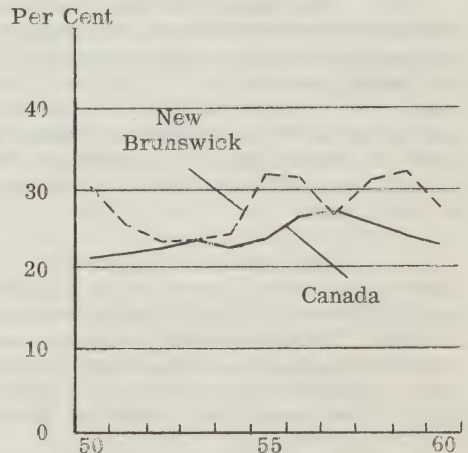
new area, every primary job created by the investment will probably require at least one other job to service the new plant and the workers. In established areas where services are already available, part of the new demand may be met through increased utilization of existing services.

Investment may bring about conditions which are favourable for further investment. This may happen because the new investment creates external economies. This is the rationale of the industrial complex and industrial estate principles. Or the new investment might induce further investment because of its psychological effect on entrepreneurs.

1950-1960 Chart 1 below compares new capital investment as a percentage of gross product in New Brunswick and Canada for the period 1950-1959. Over the period new capital investment accounted for 28.3 per cent of gross product in New Brunswick compared with 23.9 per cent for Canada as a whole. The trend in the rate of investment was slightly upward over the period for the province and the nation.

On a per worker basis, new capital investment in New Brunswick averaged \$888 over the period 1950-1959, compared with \$1,185 for Canada as a whole. The relationship fluctuated widely, from 90 per cent of the Canada average in 1950 to 60 per cent in 1953 and up again to 87 per cent in 1959.

Chart 1 - Rate of Investment, Canada and New Brunswick, 1950 to 1960



Source: See Table 30, Appendix B.

Chart 2 on page 8 shows the proportion of the investment expenditures devoted to machinery and equipment, housing, and to all other forms of construction in New Brunswick for the years 1950-1951 and 1959-1960.

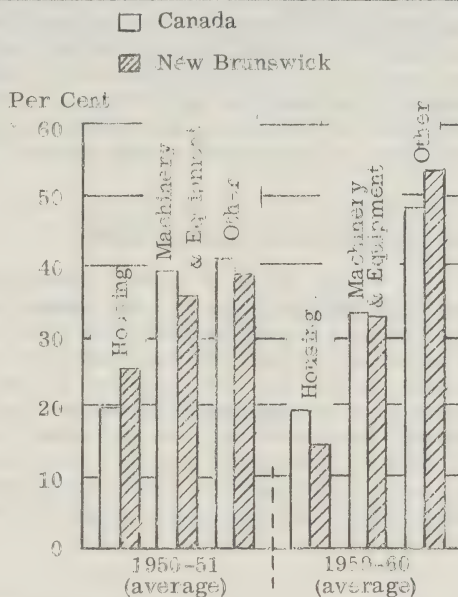
The differences between the proportion of new capital investment (excludes repair and maintenance expenditures) allocated to housing, machinery and equipment and all other types of assets combined were not significant at the beginning of the decade. The only noticeable change which took place during the decade was housing, which dropped from 25 per cent to 15 per cent of the total investment bill in New Brunswick, while for Canada as a whole the proportion remained unchanged. In New Brunswick the actual level of housing investment remained the same but total investment increased and this had the effect of reducing housing's share.

For the whole period 1950-1960 the New Brunswick economy allocated 18.5 per cent of its investment outlay in housing and Canada 19.5 per cent. Investment in machinery and equipment accounted for 34.8 per cent of the New Brunswick capital investment, compared with 33.5 per cent for Canada as a whole.

It might also be interesting to examine how New Brunswick's investment outlay was allocated on an industrial basis. Unfortunately, the data available are for broad industrial groups but a look at what happened in these groups between 1950-1960 is worthwhile.

New investment in the private sector of the New Brunswick economy between 1950 and 1960 accounted for a considerably smaller proportion (71 per cent) of total new investment than in Canada as a whole (81 per cent). Even this comparison probably overstates New Brunswick investment in the private sector, since it was during this period that Camp Gagetown was built including, of course, a large number of housing units for service personnel. Investment in public utilities made up about the same proportion of the total in New Brunswick as it did in all of Canada. Only 12 per cent of New Brunswick new investment was allocated to manufacturing, compared with 16 per cent in Canada. Part of this difference is the result of the relative importance of manufacturing in the two economies, part the result of differences in the structure of the industry, and the rest is the result of other factors. The manufacturing industry in New Brunswick averaged \$666 per worker over the period 1950-1959, compared with \$840 for Canada as a whole.

Chart 2 - Capital Investment in Canada and New Brunswick, 1950-51 and 1959-61



Unfortunately, no information is available on investment in the manufacturing subgroups in New Brunswick. This information is available for Canada and shows large differences in the amount of investment per worker in the various sectors of the manufacturing industry. Over the 11-year period 1950-1960, investment per worker in Canadian manufacturing industry ranged from \$95 in the leather products industry to \$6,085 in the petroleum and coal products industry. Hence the structure of the manufacturing sector has a considerable influence on the level of new capital investment.

The Measurement of Labour Demand

The level of labour demand can be measured by summing the employed labour force and the number of job vacancies in existence. For Canada as a whole there are several statistical series which give a reliable estimate of employment by industries on a monthly and/or an annual basis. For the province of New Brunswick the only comprehensive statistics on employment are from the decennial census. There are several series which give employment data for part of the labour force of some of the New Brunswick industries. These statistics were used to estimate employment in the various industries for the years 1950-1960. These estimates are shown in Table 36 in Appendix B, together with details of the methods used.

The Industrial Distribution of Employment

Between June 1950 and 1960 employment increased from an estimated 155,000 to 177,500. The increase was marked by many fluctuations. The industries principally responsible for these fluctuations were forestry and construction. Employment in forestry was affected by changes in demand and by weather conditions, while large construction projects like Camp Gagetown and the oil refinery resulted in a large temporary increase in construction employment.

Over the same period, employment in 'goods-producing' industries decreased from 82,400 to 74,100, while in the 'service-producing' industries it increased from 72,700 to 103,400. As a percentage of the total, employment in the goods-producing industries fell from 53 per cent in 1950 to 42 per cent in 1960. Employment in the service-producing industries increased from 47 per cent of the total to 58 per cent. These changes are shown clearly in Table 7 on page 10.

While similar shifts occurred in the Canadian economy, the shifts were less pronounced. Between 1950 and 1960, employment in goods-producing industries in Canada decreased from 57.6 per cent to 47.7 per cent of total employment. The actual number employed in goods-producing industries remained the same, since declines in the primary industries were offset by increases in manufacturing and construction.

Table 7 - Industrial Distribution of Employment in New Brunswick
1950 and 1960

Industries	1950		1960	
	Number (thousands)	Per Cent	Number (thousands)	Per Cent
<u>Goods-Producing</u>	82.4	53.1	74.1	41.7
Primary	44.0	28.4	33.0	18.5
Manufacturing	30.1	19.4	28.0	15.8
Construction	8.3	5.3	13.1	7.4
<u>Service-Producing</u>	72.7	46.9	103.4	58.3
Transportation, Storage, Communication and Public Utilities	16.2	10.5	18.2	10.3
Trade and Finance	24.1	15.5	31.4	17.7
Service	32.4	20.9	53.8	30.3
All Industries	155.1	100.0	177.5	100.0

Source: See Table 38 in Appendix B. Excludes the 'not stated' group.

In New Brunswick employment in manufacturing decreased absolutely and as a proportion of total employment, while in all of Canada manufacturing employment increased but not quite as fast as total employment. Hence manufacturing's share declined from 26.1 per cent in 1950 to 24.8 per cent in 1960. Figures for Canada are shown in Table 8 on page 11.

One interesting aspect of this shift in the industrial structure of New Brunswick is the effect which it had on the occupational distribution of labour demand. In 1951, the census data showed that women accounted for only 6.9 per cent of total employment in the goods-producing industries but accounted for 39 per cent of employment in the service-producing industries.

Just on the basis of the changes in the industrial structure, the employment of women should have increased by 40 per cent between 1951 and 1960, that is from 33,300 to 46,500. According to the 1961 census there were 45,806 women in the New Brunswick labour force. Since total employment was estimated at 177,500 in June 1960 and 46,500 were women, this means that male employment stood at 131,000, unchanged from 1951. The 1961 census showed that there were 132,549 men in the New Brunswick labour force.

Table 8 - Industrial Distribution of Employment in Canada,
1950 and 1960

<u>Industries</u>	1950		1960	
	<u>Number</u> (thousands)	<u>Per Cent</u>	<u>Number</u> (thousands)	<u>Per Cent</u>
<u>Goods-Producing</u>	2,903	57.6	2,927	47.7
Primary	1,248	24.8	909	14.8
Manufacturing	1,316	26.1	1,523	24.8
Construction	339	6.7	495	8.1
<u>Service-Producing</u>	2,140	42.4	3,212	52.3
<u>Total All Industries</u>	5,043	100.0	6,139	100.0

Source: Labour Force Survey, June 1950 and 1960.

Over the next few pages, the report will try to explain why these divergent employment trends occurred, by examining in more detail what happened to employment and output in individual industries.

Agriculture Employment in agriculture declined from 27,900 in 1950 to an estimated 18,800 in 1960. Net value of production in agriculture, which stood at \$32.2 million at the beginning of the period, had fallen to \$29.1 million at the end of the period. If allowance is made for changes in prices, physical production declined somewhat more than that but less than employment. The index of physical volume of agricultural production which stood at 140.2 in 1950 (1935-1939=100) had fallen to 125.8 by 1961. This is a drop of 10 per cent compared with a fall of 30 per cent in employment. It should be pointed out that 1950 was an exceptional year for New Brunswick agriculture.

Since farms in New Brunswick are smaller than in the rest of Canada, one would expect that income per person engaged in agriculture would also be lower, and it is. In 1960 production per agricultural worker amounted to approximately \$1,800, compared with \$2,500 for Canada.

The total land area of New Brunswick is 17.6 million of which 2.2 million, or 17 per cent, were in farm land in June 1961. Nearly one third of this is improved land and two thirds of the improved land is under crop; the balance is in pasture land. In 1951 there were 26,431 farms with an average of 134.8 acres. By 1956 the number of farms had decreased to 22,116 and by 1961 to 11,786. The large drop between 1956 and 1961 is partly the result of a change in definition and partly the result in the change of real factors. In the 1956 census a farm was defined as a "holding on which agricultural operations were carried out and which was (a) 3 acres or more in size, or (b) from 1 to 3 acres in size and with agricultural production during the previous

year valued at \$250 or more". For the 1961 census a holding was not considered a farm unless it sold \$50 worth of product even if it was 3 acres or more. If the definition had not changed, the number of farms in 1961 would have been 18,331.¹

Table 9 - Net Value of Agricultural Production and Index
of Physical Production, 1950-1961

Year	\$ million		1935-1939=100	
	Canada	New Brunswick	Canada	New Brunswick
1950	1,887.2	32.2	137.8	140.2
1951	2,480.5	32.4	154.7	110.4
1952	2,623.2	39.3	166.2	109.4
1953	2,264.3	30.9	157.9	121.6
1954	1,575.3	31.7	119.7	114.1
1955	1,948.5	28.5	150.4	135.9
1956	2,675.6	37.7	169.5	127.5
1957	1,675.6	31.9	133.9	126.7
1958	1,925.0	31.3	145.3	118.2
1959	1,850.0	28.8	144.6	114.4
1960	2,001.1	33.9	154.4	122.8
1961	N/A	N/A	126.5	125.8

Source: Survey of Production, Table 7, DBS, and Index of Farm Production, DBS.

The above definition of a farm makes it quite obvious that many persons living on farms do not earn their living only from farming operations. This was brought out clearly by a national study and also by the Gloucester County study. In the latter report, 84 per cent of the rural families, where the head had a record of broken employment and where the head did not earn his living from the farm or forest,

¹ Census of Canada, 1961, DBS Bulletin SA-1, Tables 1 and 2, and Introduction.

received income in cash or kind from the land. The net value of this income averaged \$550 per family and represented an addition of 20 per cent to the family income from other sources. Well over half of the 18,331 farms mentioned above would fall in this category.

A commercial farm was defined in both census to include "all farms reporting \$1,200 or more sales of agricultural products for a 12-month period". On the basis of this definition, the number of commercial farms in New Brunswick decreased from 7,704 in 1951 to 5,116 in 1961. Commercial farms in New Brunswick represented only 43.4 per cent of the total number of farms in 1961 compared with 75 per cent in Ontario and 65 per cent in Quebec. This further emphasizes the low income of New Brunswick farmers already discussed.

The productivity of farm labour is not only related to the size of farm or the fertility of the soil but also to the use of machinery, as well as many other factors. Table 10 below compares the number of farms reporting farm machinery in New Brunswick and Canada (excluding the Prairie region).

Table 10 - Number of Farms Reporting Farm Machinery, 1961,
New Brunswick and Canada

<u>Item</u>	<u>Canada (Excluding the Prairie Region)</u>		<u>New Brunswick</u>	
	<u>Number</u>	<u>Per Cent</u>	<u>Number</u>	<u>Per Cent</u>
Motor Trucks	94,008	34.8	4,165	35.3
Tractors	223,717	82.7	6,866	58.3
Grain Combines	32,589	12.0	764	6.5
Electric Power	256,239	94.7	11,328	96.1
Total Farms	270,461	100.0	11,786	100.0

Source: Census of Canada, 1961, Bulletins AA-3 and SA-1.

Generally speaking, New Brunswick farms did not use farm machinery to as great an extent as the rest of Canada. Of all farms in New Brunswick 58 per cent reported ownership of tractors, compared with 83 per cent for Canada (excluding the Prairie region). New Brunswick farms, on the other hand, were well equipped with trucks and electric power. The number of combines reflect the comparative unimportance of grain. While the lack of farm machinery is to some extent the cause of low productivity of New Brunswick agriculture, low productivity and the resulting low incomes prevent farms from increasing mechanization. It is a vicious circle.

In 1960 the principal sources of farm income were potatoes, dairy products, cattle, and forest products in that order. These four commodities together accounted for about three quarters of the cash income of New Brunswick farmers. The value of these commodities fluctuated rather widely but no overall trend emerged, except hog production which declined steadily from \$5.5 million in 1950 to \$3.3 million in 1960. Production of forest products held steady between 1951 and 1956 and then dropped rapidly. This is partly the result of changes in the statistics and partly the result of changes in demand conditions and the reduction in the number of farms.

There are many factors responsible for the decline in the number of farms and consequently the number of farmers. In some areas of the province, the breakdown of established pattern of employment in agriculture and fishing, or agriculture and logging, have been disturbed by changes in technology. The introduction of larger boats requiring more time at sea makes it difficult for fishermen to look after small farms as well. The shift in the logging season from fall and winter to summer and fall has caused a similar problem for loggers.

The number of farmers in the potato growing sector has been reduced by the shrinking markets for potatoes. This has happened because: (a) consumption per capita is falling; (b) production in other provinces is increasing; (c) the South American market is not expanding because of political and economic difficulties; and (d) while the production of processed potatoes is increasing, so far, the amounts required for this industry have been limited.

In spite of the increased consumption of pig meat, the local production of hogs has been decreasing. Apparently it has become unprofitable to produce hogs under present cost-price relationships.

While many factors have prevented the development of a beef cattle industry, the lack of winter feed is probably the most important. Recent experiments with potatoes to finish beef may help to resolve the winter feed problem.

Until 1957 a relatively plentiful supply of job opportunities made it relatively easy for the farmers caught in the squeeze to find jobs elsewhere. The changes in industrial structure of the New Brunswick and national economies and the generally lower level of labour demand of the past several years have forced many of these farmers out of the active labour force.

Primary Fishing. The number of men employed in primary fishing operations in New Brunswick has been falling for many years. In June 1950 there were about 4,500 fishermen; by June 1959 the number had dropped to 2,600. Over the same period the number of large fishing crafts increased substantially. Since these crafts remain at sea longer, the number of man-hours also increased. In other words, the drop in the number of fishermen was partly offset by the increase in the number of man-hours which accompanied the increase in the number of larger fishing crafts.

Primary fishing operations in New Brunswick are highly seasonal and the number of fishermen can vary anywhere from a few hundred in the middle of the winter to 9,000 or 10,000 at the peak of the summer season. This is partly because of the seasonal characteristics of in-shore species and partly because a large part of fishing activities are carried on in the Gulf of St. Lawrence which is blocked with ice during the winter.

In spite of the 42 per cent decline in employment in primary fishing, landings of sea fish declined by only 7.6 per cent, from 242.8 to 224.3 million lbs. Landings of ground-fish species increased by 80 per cent over the period 1950 to 1959, from 39 to 71 million lbs. Landings of molluscs and crustaceans declined by 60 per cent while landings of pelagic and estuarial species fell by about 17 per cent.

The decrease in the landings of oysters was the result of disease which practically destroyed existing oyster beds. The decline in the yield of soft shell clams, however, was the result of over-exploitation by fishermen. The catch of herring and sardines is subject to large annual fluctuations. The actual catch depends upon the size and duration of in-shore runs, and year-to-year comparisons are difficult to make.

The value of fishery products increased from 6.8 million in 1950 to 8.8 million in 1959, in spite of the decrease in the physical volume of the catch. Most of this increase reflects changes in price of many species, although some relative shifts from low price to high price species also contributed to the increase.

The increase which took place in the landings of ground-fish species is the result of fleet expansion which, in turn, is associated with market conditions for frozen fish products and the extent of government assistance in the construction of large fishing crafts.

The number of men fishing on draggers and trawlers increased from 174 in 1950 to 318 in 1957. Unfortunately data are not available on a comparable basis after 1957. Information which is available suggests a continuation in the expansion of large vessels. In 1958 there were 96 vessels of 25 tons and over; by 1960 this had increased to 138. Since some old vessels were retired from fishing operations, the number of new vessels constructed was somewhat more than the net increase indicates. Three draggers of about 85 feet in length are under construction at Bathurst and two of 116 feet at Saint John.

Many of the vessels built during the 1950's were small draggers built for fishing in the Gulf of St. Lawrence. Since fishing activities in this area are not possible during the winter months, the acquisition of these vessels did not reduce seasonal unemployment in primary fishing operations and fish processing to any great extent. It did, however, reduce the duration of the seasonal slack period. The draggers which are under construction will do more to reduce seasonal unemployment since they will operate from the south coast where winter operations are feasible.

Forestry Of the total land area of New Brunswick, 85 per cent is classed as productive forest, of which one half is provincial Crown land. The productive area is estimated at 23,808 square miles. The total volume of wood of merchantable sizes is 16.9 billion cubic feet, of which 71 per cent is softwood and the balance is hardwood.

Forestry resources provide the basis for three fairly large industries: logging, manufacturing of wood products and paper products. These three together accounted directly for 29 per cent of employment and net value added in the goods-producing sector in 1959. Employment in logging fluctuated widely between 1950 and 1960 and by the end of the period was the same as at the beginning, 10,200. Employment in the wood products industry declined from 6,700 to 4,700 in 1959, while employment in the paper products sector increased from 4,700 to 5,400. Forestry operations are affected by the weather and hence subject to large seasonal fluctuations.

Table 11 below shows the value and volume of primary forest production in New Brunswick, compared with Canada (excluding British Columbia).

Table 11 - Volume and Value of Primary Forest Production,
New Brunswick, 1950-1960

<u>Year</u>	<u>New Brunswick</u>		<u>Canada</u> (excl. B.C.)	<u>N.B. as a % of Canadian Value</u>
	<u>Volume</u> (thousands of cubic feet)	<u>Value</u> \$000's	<u>Value</u> \$000's	
1950	199,067	39,329	428,237	9.2
1951	282,095	69,498	591,619	11.7
1952	223,651	56,743	530,442	10.7
1953	190,978	45,214	477,087	9.5
1954	174,948	40,593	482,970	8.4
1955	202,645	45,930	428,958	10.7
1956	258,562	63,429	600,471	10.6
1957	201,847	46,469	521,257	8.9
1958	172,215	40,961	416,722	9.8
1959	172,602	33,060	458,066	7.2
1960	187,297	40,716	501,510	8.1

Source: "Operations in the Woods", DBS.

While there have been large fluctuations in the volume of production, the general trend has been downward. Part of the apparent decline is the result of changes in the estimates of production from farm woodlots. More important are demand conditions in foreign markets and the inability of small sawmills to compete against the larger mills of British Columbia in the central Canadian market or meet the standards of quality demanded in foreign markets.

The two principal products of the primary operations in the woods are 'logs and bolts for sawing' and 'pulpwood'. Of these two, pulpwood is the more important, accounting for nearly 62 per cent of total production in 1960. The relative importance of these varied considerably between 1950 and 1960, but by the end of the period were about the same as at the beginning.

Of the total value of forest production, estimated at \$33 million, it is interesting to note that an estimated \$5.3 million, or 16 per cent, is produced on farm woodlots.

In relation to current demand for wood products, the New Brunswick economy is in an over-supply position. With the large decrease in farming noted above, farms are being returned to the forest at a very high rate. Furthermore, the introduction of cutting methods which permit fuller utilization of trees also increase the yield from existing forest stocks. The installation by the larger sawmills of machines which convert waste into chips suitable for pulping have also contributed to the increased yield from existing stocks. In 1961 the equivalent of 150,000 cords of pulpwood was produced from sawmill waste.

The introduction of mechanical equipment in the logging industry has not only reduced the length of the seasonal slack period but has shifted the seasonal pattern. The peak of the logging season is still in November and December but the active season has shifted from October-to March to May-to December. The amount of logging done in the winter months has been reduced as a result of the introduction of trucks for hauling operations. Mechanization which increases output per man-hour forces the logging operators to lengthen the working year. This tends to reduce seasonal unemployment but, at the same time, to accentuate general unemployment problems.

The necessity of reducing the cost of raw materials and also eliminating the necessity for holding large inventories will force logging operators to increase mechanization and this in turn will require a well trained, but much smaller year-round labour force. Obviously the wages which these loggers will earn and the conditions under which they will work will represent substantial improvements over those of the past. Recent introduction of legislation relating to labour standards will help to accelerate this process.

The result of these changes will be a smaller but more efficient fully employed and better paid labour force. This higher income will indirectly increase employment in the New Brunswick economy; what proportion of the increased income will be spent on New Brunswick goods and services depends on the spending patterns of the recipient of this additional income.

Mining The mining industry is not a large employer of labour in New Brunswick. In 1950 there were 1,400 persons working the mines of whom 1,000 were coal miners. Employment in coal mining remained fairly stable over the whole period. There was an increase in metal mining operations in northern New Brunswick between 1950 and 1956, but these were subsequently reduced, so that by 1960 employment was at the same level as it had been in 1950. Recent resumption of mining operations in Gloucester County has improved the employment picture in the industry.

In terms of value, the production of the mining industry increased steadily during the decade. It amounted to \$12.8 million in 1950 and had increased to \$17.1 million by 1960. Nearly all this increase is the result of increases in output. The real output of non-metallic minerals increased by 27 per cent between 1950 and 1960, while real output of coal increased by over 60 per cent.

The increase in the output of non-metallic minerals resulted from an increase in the employment in gypsum mining and the harvesting of peat moss. The production of peat moss increased from 5,535 tons in 1950 to 21,062 tons in 1960 while gypsum increased from 82,641 to 90,892 tons over the same period.

The increase in the production of coal is the combined result of increases in output per man-day and a shift from the low productivity underground to the high productivity strip mining operations. Production from strip mining increased from 339,639 short tons in 1950 to 870,637 short tons in 1960, while the output of underground mines fell from 267,477 to 157,427 short tons. Output per man-day increased from 4.1 tons to 6.2 tons in strip mining and 1.5 tons to 1.8 tons in underground operations.

Production of metals, mostly copper, lead and zinc, began in 1955 but was discontinued in 1958. At its peak in 1957, the value of production of metals was nearly \$5 million. The metal mining operations were resumed in 1962 but it is too early to say at what level operations will be maintained.

Long-term prospects for these minerals vary considerably, from very good for structural materials and metals to very poor for coal. In terms of employment only a very modest increase can be expected in direct employment in the mining industry. Fortunately, the province probably still has some unexploited mineral resources in both the metallic and non-metallic groups so that in terms of income, these resources could become very important.

Manufacturing Between June 1950 and June 1960 estimated employment in manufacturing fell from 30,100 to 28,000. Since total employment increased from 156,200 to 178,600, manufacturing's share dropped from 19 per cent to 16 per cent of the total.

The value of output of the manufacturing sector increased \$106.2 million in 1950 to \$158 million in 1960. There is no measure of physical production for manufacturing in New Brunswick. However, between 1950 and 1959 value added by manufacture for Canada increased 74 per cent, while the increase in real production was estimated at 44 per cent. Over the same period value added in New Brunswick increased by 26 per cent. Other things being equal, real production in New Brunswick probably increased by less than 15 per cent.

This increase, in spite of a drop in employment, suggests some increase in average productivity; it could have occurred because of a real increase in output per man or because of a shift from industries with low output per man to those with a higher output, or both. An examination of the subgroups shows an actual decrease in employment in fish processing, textiles, clothing and wood products, and transportation equipment, and an increase in pulp and paper and non-metallic mineral products. Employment in the manufacture of iron and steel products remained stable and, therefore, increased from its relative position. While it is difficult to be precise, it would appear that the shifts which took place favoured those industries in which the value of the output per man is highest.

The following paragraphs examine in more detail what happened to output and employment in some of the important subgroups in the manufacturing sector in New Brunswick between 1950 and 1959. Data were not available for 1960 at the time of writing.

The food and beverage sector is the largest employer of labour in the manufacturing industry. Employment in this sector remained relatively stable over the decade; it stood at 6,900 in 1950 and 6,800 in 1959. Employment in fish processing fell from about 3,000 to 2,700, but this was partly offset by the increase in employment in the processing of other foodstuffs which increased from 3,900 to 4,100.

The value of production increased from \$25.9 million in 1950 to \$39.4 million in 1959. In 1959, the value of fish products represented about one fifth of the value of production of the food and beverage sector. It is extremely difficult to determine what part of this increase is the result of an increase in output and what part the result of a shift in the product mix. What data are available suggest that both factors were at work.

The products of the fish processing industry are mostly for the export market with the bulk of the frozen products being sold to the U.S.A. and the salted fish products in the Caribbean area. The drop in the market for salted fish products and the unfavourable

cost-price relationship in their production, had its effects on their output. On the other hand, a steadily rising demand for frozen products resulted in an increase in landings of ground-fish.

These shifts also had their effects on the size of the operating unit. In 1950 there were 165 establishments in the industry with an average of 18 employees; by 1959 the number of establishments had been reduced to 99 with an average of 27 employees per unit. The trend towards larger units will probably continue, and it is likely that with it will come the installation of better machinery and higher productivity. This of course means that output can increase considerably without a corresponding increase in employment.

The only changes in the processing of other foodstuffs were a moderate increase in the processing of dairy products and the introduction of vegetable processing, including the freezing of vegetables and the processing of potato chips.

Employment in the textile industry fell from 2,000 in 1950 to about 400 in 1959, a drop of 80 per cent. There was a similar drop in the value added by the manufacture of textiles. In 1950 there were 15 establishments in the industry with a total output of \$6.8 million. By 1959 there were still 14 establishments operating but the value of their output had fallen to \$1.5 million, a drop of over 80 per cent. Over the same period, textile employment in the rest of Canada fell by about 20 per cent. Employment in the woollen goods sector fell by 40 per cent and in the cotton yarn and cloth by 30 per cent. Employment in the production of miscellaneous products increased by 80 per cent.

The reasons for the decline of the cotton and woollen sector of the textile industry in New Brunswick are the same as in the rest of Canada: the growth of synthetic fibres and foreign competition. This was further aggravated in New Brunswick by the fact that textile plants were old and badly in need of new machines. Unfortunately, the plants were branch operations and the parent companies concentrated their new capital equipment in their major plants.

The clothing industry fared somewhat better than the primary textiles group. Employment in this sector declined at the beginning of the decade but picked up again so that by the end of the decade employment stood at 1,100 compared with 1,400 at the beginning.

In 1950 the wood products industry ranked second in the manufacturing sector, and employed 6,700 persons; by 1959 it ranked third and employed 4,700. Over the same period, the value of the output of the industry fell slightly from \$13.7 million to \$13.3 million. Since prices increased somewhat over the period, there was a small but absolute decrease in real output.

The largest relative drop in employment occurred in the sash, door and planing mills sector of the industry, which fell by 500, or 40 per cent. The largest absolute drop occurred in sawmilling which fell by 1,300, or 26 per cent. This can be seen in Table 12 on page 21.

Table 12 - Employment and Value of Production in
New Brunswick, 1950 and 1959

<u>Industry</u>	<u>Number of Establishments</u>		<u>Number of Employees</u>		<u>Value Added</u>	
	<u>1950</u>	<u>1959</u>	<u>1950</u>	<u>1959</u>	<u>1950</u> \$Million	<u>1959</u> \$Million
Sawmills	454	309	5,000	3,700	9.1	8.6
Sash, Door and Planing Mills	66	59	1,200	700	3.1	3.5
Other	52	49	500	300		
Total	572	417	6,700	4,700	13.7	13.3

Source: Establishments and Value Added from "Manufacturing Industries of Canada", Section B, Atlantic Provinces, DBS, 1950-1959, various issues. For employment sources see Table 38 in the Appendix.

The decline in the sawmill industry is the result of increases in the size and efficiency of mills in the rest of Canada and abroad. In addition, the increase in the use of other materials has reduced the demand for wood products. The introduction of new products such as plywood and chipboard has displaced sawn lumber in house construction. Increases in the demand for graded sawn lumber has made it impossible for small portable mills to stay in the market.

It can be calculated from Table 12 that the average sawmill in New Brunswick employed 12 persons in 1959. Many of these small firms are in and out of business and are often forced to dump their usually poor quality product on the market at any price. The lack of a sales organization makes it extremely difficult for small operators to sell at a fair price even if the quality of the product is acceptable. This is particularly true when the sales are made in foreign markets.

The sash, door and planing mill industry also suffered from the same organizational deficiencies. Small firms with old equipment dependent on the local market are unable to meet the competition from the better equipped and much larger firms in central Canada and British Columbia. In addition, the increasing use of metal doors and windows has reduced the demand for the wooden products.

The manufacture of other wood products has never been carried on to any great extent in New Brunswick. The manufacture of pleasure craft, mostly canoes, is undertaken on a small scale. The prospects for an increase in employment, at least in the short run, are not very good. Any reorganization and modernization of industry which takes place will likely reduce the existing labour force. More efficient units may be in a stronger position to increase their work-force in the long run.

The paper products industry ranked second in terms of employment in the manufacturing sector in 1959 with 5,400 employees, or 20 per cent of the total. In terms of value it ranked first with \$47.4 million, or 35 per cent of the total.

The industry is dominated by the pulp and paper sector which in 1959 accounted for 94 per cent of total employment and 96 per cent of total value. Employment in this sector increased from 4,500 in 1950 to 5,100 in 1959, while the value of output increased from \$36.1 to \$45.6 million. Both employment and output will have expanded since 1959, and will at least continue to increase for some time since plans for two new mills are under way.

The demand for pulp and paper products is expected to expand in the United States, Europe, South America and Asia as well as in Canada.² This should assure the continued growth of this sector of the industry. Whether employment growth will accompany the growth of the industry depends upon what happens to productivity in relation to the growth in output. The experts believe that increases in demand will only balance increases in productivity. It is difficult to say what New Brunswick's share of this expanding world market will be. Because of its large supply of pulpwood, it should increase its share. One should not expect large increases in employment in this sector since further increases in productivity will satisfy at least part of the higher demand.

Employment in and value of production of the transportation equipment industry fluctuated widely between 1950 and 1960.

From a work-force of about 3,600 in 1950, employment increased to 4,900 by 1953 and then declined steadily until it reached 2,700 by 1959. Value added by manufacturing of transportation equipment rose from \$5.9 million in 1950 to \$11.9 million in 1953 and then declined steadily until 1959 when it amounted to \$7.8 million.

From published data it is not possible to know what happened within the sector. It is general knowledge that employment in the Saint John shipyards declined considerably over the period. It seems likely, therefore, that one of the principal reasons for the fall in employment in the transportation equipment industry is the decline in the shipbuilding sector. This in turn is the result of lack of demand, foreign competition and the physical condition of shipbuilding facilities.

Recent developments in Saint John and Bathurst will provide employment opportunities for an increasing number. For the next few years at least, the federal Government's vessel construction assistance program should ensure a reasonably high level of employment in these

² Royal Commission on Canada's Economic Prospects, "The Outlook for the Canadian Forest Industries", p. 108 ff.

two shipyards. Their long-term prospects, however, depend upon their ability to compete against foreign shipyards in quality, price and delivery dates as well as the state of the international shipping business.

In addition to the individual subgroup discussed above, there are several other industries which although not relatively important during the 1950's are becoming more important in the 1960's. All these industries together provided an average of 200 additional jobs per year during the 1950's.

Included in the above group are the refining of crude petroleum and the manufacturing of electronics equipment. The installation of the refinery in Saint John in the late 1950's has increased employment in this sector. The recent construction of a large electronics establishment in Campbellton will make an even larger contribution.

Construction

In 1960 employment in the construction industry accounted for a little more than 7 per cent of total employment in New Brunswick; this is roughly the same proportion as it is in the rest of Canada. Employment fluctuated considerably under the impact of unusually large capital projects, such as the oil refinery in Saint John and Camp Gagetown. In addition, the Government undertook a large road construction program which also resulted in wide fluctuations in the "highways, bridges and streets" sector. The trend in employment, however, was upward, from 8,300 in June 1950 to 13,100 in June 1960.

The net value added by construction increased from \$53.1 million in 1950 to \$89 million in 1959. Differences in the proportion of construction originating in the private and public sectors in New Brunswick and the rest of Canada have already been discussed.

Over the decade, New Brunswick's share of total Canadian net value of construction dropped from 3.4 per cent of the national total in 1950 to 2.4 per cent by 1959.

The importance of the construction industry goes far beyond the amount of direct employment created or its immediate contribution to provincial output. A large part of its output represents a net increase in the existing capital stock, both industrial and social, and an increase in plant capacity. Furthermore, construction is almost entirely a 'provincial' industry. It buys much of its inputs from, and sells most of its outputs to, residents of New Brunswick. This means that most of the increase in employment and income arising from construction takes place within the province. The prospects for the industry are directly related to the prospects for the New Brunswick economy as a whole.

Public Utility

The existence of adequate electric power is one of the prerequisites of industrial expansion. The fact that its importance is often exaggerated should not detract from its real importance. It is more important for some industries than for others. It would be misleading, therefore, to discuss the importance of this industry only in terms of the amount of direct employment it provides in the New Brunswick economy.

While no recent reliable data are available, the 1951 census classified 1,652 persons employed in the 'electricity, gas and water' industry. Of these, 1,292 were employed in the 'electric light and power' sector. By 1960 employment had increased to an estimated 2,300 for the whole industry. Between 1950 and 1960 the net value added by electric power production increased from \$7 million to \$18.7 million in 1960. New Brunswick's contribution to the national total dropped from 2.2 per cent in 1950 to 1.8 per cent in 1960.

Electric energy generated in New Brunswick in 1960 amounted to 1.7 billion kilowatt hours, of which 53 per cent was generated by thermal power and the balance of 47 per cent by water power. About 64 per cent of the electricity generated was produced by publicly-owned electric utilities, 32 per cent by industrial establishments and 4 per cent by privately operated utilities.

It is difficult to measure accurately the adequacy of electric energy because different industries require different amounts of energy. Hence, regions with dissimilar industrial structures will require varying quantities of energy. One comparison which can be made is the relation between the number of kilowatt hours per worker in New Brunswick and the number for Canada as a whole. On that basis the electrical energy available per worker in 1960 amounted to 10,000 kilowatt hours per worker in New Brunswick compared to 17,000 kilowatt hours for Canada as a whole.

It would appear that there is an ample supply of power in relation to current demand both in terms of total and peak load demand. In 1961 the firm peak load requirement was estimated at 319,000 kilowatts while peak load capability was estimated at 420,000 kilowatts. An estimated 22,000 kilowatts was exported to the United States, leaving a reserved 79,000 kilowatts. Since Nova Scotia also had an estimated peak load reserve of 160,000 kilowatts and since the two provinces are linked by a power grid, power can be quickly shifted from one to the other. In a physical sense, therefore, there is no current shortage of electric power in New Brunswick.

Another way of comparing the adequacy of electric energy is in terms of cost to the user. Unfortunately, data on costs are inadequate for a detailed comparison. Figures available on the cost of electricity and fuel suggest that New Brunswick costs are higher. In 1959 costs of fuel and electricity in manufacturing amounted

to 4.3 per cent of the total value of manufactured products, compared with 2.4 per cent for Canada as a whole. This was also true for most individual industries within the manufacturing sector. Statistics on monthly electricity bills for unrestricted 24-hour commercial service and power service suggest that users in New Brunswick pay about the same as comparable users in most municipalities in Quebec but more than in most municipalities in Ontario, and Manitoba. They appear lower than Nova Scotia and British Columbia.

Another comparison can be made on the basis of the cost of generating electric power. In 1960 total operating expenses of publicly and privately operated utilities amounted to 1.6 cents per kilowatt hours in New Brunswick compared with 0.8 cents for Canada as a whole.

The evidence on cost is not conclusive but what there is strongly suggests that costs are higher in New Brunswick than the rest of Canada. Furthermore, it is no criticism of the suppliers of electric energy in New Brunswick to point out that energy used is probably too low and may be partly responsible for lower productivity per man. The suppliers provide quantities demanded by the users with a considerable reserve.

The effects which high costs of electric power have on the location of industries requiring large blocks of power are obvious. Furthermore, for those industries which require less power, its high cost may represent one additional unfavourable item in their production costs.

Transportation, Storage and Communication

Employment in this industry increased slightly between 1950 and 1960. Decreases in employment in railways and water transportation were more than offset by increases in road transport, storage and communication. In 1950 the railways employed 8,500 persons in New Brunswick but by 1960 they employed only 7,700. The introduction of diesels and changes in the number of maintenance personnel in New Brunswick were responsible for the drop. The decrease in employment in water transportation resulted from: (1) the increasing use of mechanical loading and unloading equipment; (2) competition from improved road transport; and (3) the decrease in the number of ships making their home ports in New Brunswick.

The increase in road transport was made possible by the improvement in road conditions and the development of better trucks, including the introduction of refrigeration equipment.

The importance of transportation cannot be judged only by the number of jobs provided. Of much greater importance is the adequacy of the whole transportation system to carry the output of industry to markets as quickly and cheaply as possible. The province of

New Brunswick is reasonably well served by all forms of transport, although the geographic location of the province makes transportation of goods to the central Canadian market expensive.

To offset this cost disadvantage the federal Government provides for a 20 per cent reduction on freight shipments within the Maritime region. Rates on shipments to other provinces are reduced by 30 per cent from any point in the Maritime provinces to Levis, Quebec.

It is difficult to give a precise picture of the importance of freight costs to New Brunswick industry. This would depend on distance to market, weight-to-value ratios and the extent of competition in the market. Suffice it to say that items whose ratio of weight-to-value is high are unlikely to compete in the central Canadian market with similar items manufactured adjacent to that market. On the other hand, these items enjoy a cost advantage within the Atlantic region. Unfortunately, the central Canadian market serves a population of over 12 million, while the Atlantic region serves less than 2 million. On the other hand, New Brunswick's location does give it an advantage in terms of European, central and South American markets. This factor, while not of great importance today, could become significant in the future.

Finance, Insurance and Real Estate

Employment in this group of industries increased steadily from 2,400 in 1950 to 3,100 in 1960 an increase of nearly 30 per cent, compared with an increase of about 50 per cent for the country as a whole. This increase reflects the increase in population, incomes, and the financial needs of the business community. Hence, this industry can be expected to provide jobs in increasing numbers, although office automation may permit large increases in the services provided without a comparable increase in employment.

The real importance of this industry, however, is reflected in its adequacy as a provider of marketing facilities for lenders and borrowers. It has often been argued that a shortage of 'capital' is one of the major problems of the Atlantic region. In the argument the shortage of capital is equated with the level of investment which is considered insufficient to provide the desired rate of growth of the region.

There is some evidence that the level of investment, at least in the private sector, is too low. There is no evidence that this is because of a shortage of investible funds in the capital markets. It must be remembered, however, that New Brunswick firms must compete in the national market for funds. To compete successfully prospective investments must offer equal profit opportunities or this will be reflected in the cost of raising these funds. Furthermore, entrepreneurship is also a resource which tends to move where the opportunities for profit are greatest. In a slow growth area, there may be a shortage of entrepreneurs to take advantage of those opportunities which exist.

Trade

Employment in trade increased from 21,700 in 1950 to 28,200 in 1960. Both the retail and wholesale sector increased at about the same rate. This is directly related to increases in population, incomes and, to a lesser extent, tourist expenditures. In 1960, the value of retail trade in New Brunswick totalled \$477.3 million.

Assuming that population, incomes and the tourist trade continue to grow, it seems reasonable to expect a continuing increase in employment in the retail and wholesale trade industry. With the introduction of discount stores, large supermarkets and automation, employment will probably not increase as fast as the volume of sales.

Service Industry

The 'service' industry is a cluster of different segments ranging all the way from a small barber shop to the armed forces. Generally speaking, establishments operating in this industry sell 'services' rather than 'goods'. This, however, is not strictly true since restaurants, which are included in the industry, sell 'goods' in the form of food and 'services' in the form of the labour of waiters and waitresses who serve it.

Employment in the service industry (excluding the armed forces) generally keeps pace with the growth in population and incomes. Between 1950 and 1960, employment in the service sector increased from an estimated 32,400 to 53,800, an average of about 1,900 persons per year. As incomes increase people spend an increasing part of their incomes on services. This is fairly universal. It is likely, therefore, that the service industry will provide an increasing proportion of job opportunities in the future.

Occupational Trends

In the preceding pages we have tried to show what has happened to employment in individual industries and why these changes have taken place. Of equal importance are the effects which industrial changes had on employment in the various occupations.

Unfortunately, information on employment by occupation is not available for the provinces between the decennial census dates. In an attempt to plug the gap, and also to acquire qualitative information on training needs, the Committee acquired the services of Professor Cunningham of Mount Allison University to examine the trends in occupations in New Brunswick since 1955. Because of the limited time available and the nature of the sample, it was not possible to get reliable information on numbers involved.

There are three principal reasons why an increase (or decrease) in employment in a particular occupation might occur. These are: (1) an increase (or decrease) in total employment in the economy; or (2) an increase (or decrease) in the relative importance of an industry within the economy; and (3) an increase (or decrease) in the relative importance of an occupation within a particular industry.

The first two kinds of changes can be measured within the limits of the estimates of industrial employment previously discussed. The third kind of change cannot be measured because of lack of data. Nor can information from previous census be used with any certainty. This can be seen clearly by examining the increase in the employment of engineers in Canada from 1931-1961.³

Of the increase in the employment of engineers which occurred between 1931 and 1951, 33 per cent was the result of an increase in total employment, 66 per cent the result of an increase in employment in those industries employing engineers, and only 1 per cent was the result of an increase in the relative importance of engineers within these industries.

Of the increase which took place between 1951 and 1961, 25 per cent was the result of an increase in total employment, 9 per cent the result of a relative increase in employment in those industries employing engineers, and 66 per cent the result of an increase in the proportion of engineers employed within those industries which employ engineers.

From 1951 census data on employment for New Brunswick, tables were prepared showing the proportion of each industry employed in the various occupations. Tables 41, 42 and 43 contain this information and can be found in Appendix B.

The table on page 29 shows the occupations which should have increased and those which should have decreased as a result of increases in total employment and changes in the relative importance of some industries. This was estimated by applying the 1951 occupational pattern to the 1960 estimates of employment by industry.

What is most striking from the following table is the large increase in 'white collar' occupations and the large decrease in 'blue collar' and 'primary industries' occupations.

Another important result of these occupational changes is the effect that they have on the employment of women. As is well known, women are not found in large numbers in primary industries or in 'heavy' manufacturing industries. They are, however, very important in the clerical, sales, service, food processing and textile occupations. Since the industries in which these occupations are found in greatest number have increased relative to the primary and heavy industries, the industrial changes which took place in New Brunswick between 1951 and 1959 resulted in a large increase in the employment of women. At the same time there was no increase in the employment of men.

³ "Engineers and the Canadian Economy", by J.P. Francis, Director, Economics and Research Branch, Department of Labour, Ottawa; an address given at the 1962 Annual General Meeting of the Engineering Institute of Canada.

Table 12a - Numerical and Percentage Changes in Employment by Occupational Group, New Brunswick, 1951 and 1960⁽¹⁾

	1951	1960	Change	
			Numerical	Percentage
All Occupations	165,100	178,600	✓ 13,500	✓ 8.2
Proprietary and Managerial	11,500	14,500	✓ 3,000	✓ 26.1
Professional	10,800	16,600	✓ 5,800	✓ 53.7
Clerical	13,500	17,000	✓ 3,500	✓ 25.9
Commercial and Financial	9,500	11,600	✓ 2,100	✓ 22.1
Transportation and Communication	17,800	18,700	✓ 900	✓ 5.1
Service	16,000	25,100	✓ 9,100	✓ 56.9
Manufacturing and Mechanical	17,300	16,800	- 500	- 2.9
Construction	8,600	10,700	✓ 2,100	✓ 24.4
Labourers	12,900	14,000	✓ 1,100	✓ 8.5
Agriculture	26,500	19,000	- 7,500	- 28.3
Logging	14,300	9,400	- 4,900	- 34.3
Fishing	4,400	2,800	- 1,600	- 36.4
Mining	900	1,000	✓ 100	✓ 11.1
Not Stated	1,100	1,400	✓ 300	✓ 27.3

Source: Census of Canada 1951 for the 1951 data. Figures for 1960 are calculated by applying the 1951 occupational distribution to the 1959 employment estimates.

- (1) At the time of writing, the 1961 census figures on labour force by occupation had just been released. Because of changes in classification it is difficult to compare them with 1951. At first glance transportation and agricultural occupations are the only two groups very much out of line.

The Table on page 30 shows the percentage of women employed in the various industries in New Brunswick in 1951.

On the basis of the proportion of women in the various industries in 1951 and the estimates of employment in 1959 for the same industries, the employment of women should have increased by about 40 per cent. There is some evidence from unpublished data to support this.

The kind of occupational changes discussed above only give a very broad outline of the effect which a changing industrial structure has on the occupational spectrum. As already mentioned, changes in the occupational structure of individual industries cannot be calculated from existing statistics.

Table 12b - Ratio of Females to Total Employment in Industrial Groups, New Brunswick, 1951

<u>Industrial Groups</u>	<u>Both Sexes</u>	<u>Females</u>	<u>Per Cent</u>
Agriculture	26,757	430	2
Forestry (chiefly logging)	15,771	140	1
Fishing (primary)	4,408	38	1
Mining	1,176	16	1
Manufacturing	30,839	4,879	16
Public Utilities	1,626	85	5
Construction	9,790	117	1
Transportation, Storage and Communication	16,221	1,441	9
Trade	22,000	6,998	32
Finance, Insurance, Real Estate	2,683	1,178	44
Service	32,700	17,971	55
Not Stated	1,171	236	19
All Industries	165,142	33,529	20

Source: Census of Canada for 1951 data.

The importance of estimating manpower requirements in terms of occupations is related to the necessity of providing the right kind of training and educational facilities. It would be unwise to build schools and train teachers to provide well trained tradesmen no longer needed by industry by the time they are trained.

The survey of industrial firms in New Brunswick failed to reveal estimates of future requirements in specific occupations. It did, however, indicate fairly clearly which occupational groups will be expanding over the next few years. These are: (1) occupations associated with electronic data processing; (2) electronic technicians; (3) instrument mechanics; (4) occupations in the radio and television broadcasting industry; (5) repair mechanics for motors of various kinds; (6) paramedical occupations; (7) cooks and chefs; (8) waiters and waitresses; and (9) some shipbuilding occupations.

Generally speaking, employers did not report experiencing difficulties obtaining a sufficient number of skilled workers, although there were some complaints about the quality of some of these workers. Moreover, they stated that they did not anticipate any difficulties in obtaining skilled labour over the next few years.

CHAPTER III

UnemploymentDefinition

The official figures on unemployment in Canada are derived from a sample survey of households undertaken each month by the Dominion Bureau of Statistics (DBS). It is known as "The Labour Force Survey". Persons are classified as 'unemployed' who are: (1) without work and seeking work, and (2) not at work because of temporary layoff up to 30 days. Included in the first group are those who would have actively looked for work but for: (a) their own temporary illness, (b) their belief that no suitable work was available in their community.

Unfortunately, the sample for New Brunswick is too small to give a reliable estimate of the level of unemployment in that province. The reliability of the estimates is increased considerably when the three Maritime provinces are grouped together.

In addition to the above, statistics from the operations of the Unemployment Insurance Act give useful data on persons who register for employment at the National Employment Service offices. Not all persons who register for employment are unemployed according to the labour force survey definition. Similarly, not all persons classified as 'unemployed' by the labour force survey register for employment with the National Employment Service.

There are a number of factors which affect the relationship between these two series of figures relating to unemployment not only in terms of their absolute level but also their movement over time. This is especially relevant to the seasonal movements. Since these factors are not the same in all labour markets, the relationship between the series is also different in the various labour markets.

The most important factors are: (1) the age and sex distribution of the unemployed; (2) the duration of unemployment; (3) the type of unemployment; and (4) the percentage of workers in insurable employment.

The young workers with no work experience, and hence not entitled to unemployment insurance benefits, are less likely to register for work than they are to seek it. Women and older workers are less likely to seek work than they are to register for it. Data from the two series support this hypothesis. The level of labour demand may also have an effect. When jobs are scarce the young may not bother to register while the old and the women, who are entitled to unemployment insurance benefits, may not bother to seek but will certainly register.

The duration of unemployment affects the individual's tendency to register. When the average duration of unemployment increases, more persons exhaust their benefits. Since there is a close relationship between the number of claimants and registrations, any reduction in the number of claims will reduce the registrations. The statistics of the operations of the Unemployment Insurance Act support this contention.

The seasonally unemployed are less likely to seek than to register. This is partly because seasonal unemployment is heaviest in winter and in rural areas where job opportunities are at their minimum. In the Gloucester County study, the seasonally unemployed tend to look for work at the beginning of the non-work period and again when economic activity begins to pick up in the spring.

The higher the ratio of insurable employment¹ to total employment the more workers are likely to register.

It follows, therefore, that in a province or region the relationship between the 'seekers' and the 'registrants' will depend on the importance of each of these factors and their combination.

The analysis of the supply and demand for labour in New Brunswick between 1950 and 1960 has shown that the number of men of working age grew faster than the labour force and that the labour force grew faster than employment. The result is a lower participation rate and a higher unemployment rate among men.

The lower participation rate is the result of a shift in the age structure of the male population biased against those age groups with high participation rates, as well as a relative decline in the demand for male labour. The shift in the age structure is the result of out-migration of men in the younger age groups, while the relative decline in the demand for male labour is the result of a change in the structure of industry which has resulted in a drop in the importance of those industries whose work force is predominantly male, e.g., the primary industries and sawmilling. Other industries employing large male work forces, e.g., transportation, storage and construction did not increase their work-force sufficiently to offset decreases in the primary industries. Reasons for these industrial shifts were discussed in Chapter 2. The result of these shifts was an increase in unemployment among men.

It is customary to classify unemployment in terms of the cause or origin of unemployment. Five principal categories are normally identified. These are: (1) structural unemployment which results from the long-term decline in the demand for the products of an industry or from the economic stagnation of a particular area; (2) technological unemployment which may occur when more efficient methods of production are introduced; (3) frictional unemployment which occurs when workers change jobs, when workers enter the labour market or when persons re-enter the labour market after a long absence; (4) cyclical unemployment which results from periodic changes in the general level of

¹ Persons in insurable employment are those covered by the Unemployment Insurance Act.

economic activity; and (5) seasonal unemployment which results from variations in economic activity that takes place within the period of a single year because of the weather, annual holidays, customs, et cetera.

Measurement

The New Brunswick economy, like the Canadian economy, has experienced all these types of unemployment. It is difficult to say to what extent New Brunswick experienced each type of unemployment since it is much easier to define the various types than it is to measure them.

At almost any time, and at almost any level of unemployment, the pool of unemployed includes all these various types. In the winter seasonal unemployment prevails; when a business recession occurs in the summer, cyclical unemployment prevails. When the economy is operating at a high level during the summer months, frictional and structural unemployment may account for most of the unemployment.

It has been estimated that the incidence of seasonal unemployment is about four times as high in New Brunswick as it is in Canada as a whole. On the basis of available statistics it is impossible to measure the other types of unemployment. It is only possible to say that non-seasonal unemployment is also higher than in the rest of Canada.

It is also impossible to measure the amount of unemployment which is caused by technological change. Nearly all industries are affected by improvements in the methods of production. For the New Brunswick economy the industries whose work-force declined most heavily as a result of technological change are agriculture and primary fishing.

Level of Unemployment

At the peak of the unemployment in the winters of 1956-1961, male registrations averaged 39,000 in New Brunswick. It has been estimated that 28,000, or 72 per cent, were 'unemployed' for seasonal reasons. The additional 11,000 were unemployed for other reasons.

There was considerable fluctuation in the relationship between the New Brunswick and the national registrations. From 1951-1956, when male registrations in New Brunswick averaged 11.5 per cent of paid workers and the national average was 6.4 per cent, the ratio of New Brunswick registrations to the national total was 5.7 per cent. From 1957-1960, when male registrations in New Brunswick averaged 16.5 per cent of paid workers and the national average was 11.2 per cent, the ratio of New Brunswick registrations to the national total was 4.5 per cent. It is difficult to be sure why this was so but it is likely that the relative importance of seasonal unemployment in New Brunswick may account for part of the explanation. The data are not sufficiently accurate to permit detailed analysis.

Table 13 - Registrations at NES Offices, Canada and New Brunswick,
1950-1961, Annual Averages

<u>Year</u>	<u>Canada Number</u>	<u>New Brunswick Number</u>	<u>New Brunswick as Per Cent of Canada Per Cent</u>
1950	153,135	13,902	9.1
1951	180,390	8,905	4.9
1952	203,848	12,370	6.1
1953	227,690	16,155	7.1
1954	265,374	18,402	6.9
1955	357,437	16,657	4.7
1956	311,333	16,509	5.3
1957	421,056	21,982	5.2
1958	588,369	27,675	4.7
1959	510,675	23,341	4.6
1960	572,908	22,951	4.0
1961	563,109	28,791	5.1

Source: Labour Gazette, Department of Labour, Ottawa, various issues.

The Table on page 5 shows the male registrations as a percentage of paid workers for Canada and New Brunswick from 1951-1960.

On the average, male registrations as a percentage of paid workers were 60 per cent higher in New Brunswick than for the country as a whole between 1951 and 1960. From 1951-1956, the provincial ratio of male registrations to paid workers was 82 per cent higher than the national ratio. From 1957-1960 the provincial ratio was only 44 per cent higher.

Comparisons of the level of unemployment do not give a complete picture of New Brunswick's manpower problems. The low labour force participation by men, the high rate of out-migration, and the low income of many persons employed in the primary industries, are equally important. These problems are not visible in the level of unemployment but are reflected in the low level of personal income per capita.

Table 14 - Registrations as a Percentage of Paid Workers,
Canada and New Brunswick, 1951-1960

Year	Canada			New Brunswick		
	Paid Workers ('000)	Regis- trations ('000)	Per Cent	Paid Workers ('000)	Regis- trations ('000)	Per Cent
1951	3,722	180.4	4.8	128.6	8.9	6.9
1952	3,853	203.8	5.3	122.6	12.4	10.1
1953	3,955	227.7	5.8	123.5	16.2	13.1
1954	3,961	265.4	6.7	124.1	18.4	14.8
1955	4,133	357.4	8.6	133.8	16.7	12.5
1956	4,388	311.3	7.1	140.4	16.5	11.8
1957	4,535	421.1	9.3	145.3	22.0	15.1
1958	4,551	588.4	12.9	145.3	27.7	19.1
1959	4,724	510.7	10.8	148.9	23.3	15.6
1960	4,837	572.9	11.8	143.3	23.0	16.1

Source: Registration figures are from the Labour Gazette; paid workers for Canada come from the Labour Force Survey, DBS, paid workers for New Brunswick are estimates prepared by the Department of Labour. Paid workers were used because for New Brunswick there is no labour force figure available except for 1951.

The Gloucester County Study

During the summer of 1960 the Committee undertook a sample survey of the labour force of Gloucester County. This survey forms part of a larger study of seasonal unemployment in the province of New Brunswick which is the subject of this report. The main purpose of the sample study therefore is to examine in more detail the characteristics of the labour force in the labour market which is subject to substantial seasonal unemployment. The survey was designed, however, to give information on many other aspects of labour supply and on many factors relating to the seasonally unemployed. It is also hoped that a survey of this kind will yield useful information on problems in small labour market areas for which there is little manpower information available between census dates. The results of the survey, particularly in relation to the unemployed could also be useful for making comparisons with data available from the operations of the Unemployment Insurance Act; this might throw new light on the usefulness of some of these data

for labour market analysis. It is also hoped that some of the results of the survey would provide an insight into some of the problems of measuring unemployment with concepts currently in use.

The sample, which was designed by the DBS, covered approximately 8 per cent of the households in the county of Gloucester at the time of enumeration. All members of the households were enumerated and all those who were 14 years of age and over were classified on the basis of labour force status. The definitions used were those in current use by the labour force survey, a monthly sample survey undertaken by the DBS right across Canada. In all, 873 households were enumerated comprising 2,732 persons 14 years of age and over. Of these, 1,341 were men and 1,391 women. On the basis of the concept used by the labour force survey, 1,196 persons were classified as members of the labour force, of whom 926 were men and 270 were women.

Since the primary purpose of the survey was to examine the seasonally unemployed, a three-year employment history was obtained for all persons who were either in the labour force at the time of the survey or had been in the labour force at some time in the previous three years. When the interviewer had obtained employment histories for the three-year period, these were examined and all those who had one month without employment were considered unemployed "unless this month of inactivity was the result of a strike or illness". In order to avoid confusion between this inactivity, and unemployment as measured by the labour force survey, the term 'broken employment' is used instead. To avoid including in the survey a large number of women who work only for a few weeks at berry picking, fruit picking or some such short seasonal activity, women were only considered as having a period of broken employment if they had worked for at least 16 weeks in any one year during the 24 months preceding the survey date. The total number of persons in the sample who satisfied the above criteria were 482, of whom 410 were men and 72 were women.

The sample is a random quota stratified for similarity of economic characteristics. The questionnaire which was designed to obtain information from persons in the household included in the sample was a personal interview type questionnaire. A copy of it will be found in Appendix C. The interviewers were officers of the federal and New Brunswick Departments of Labour.

Labour Force Participation Participation by males in the Gloucester County labour force was below the national average for all age groups. Differences were larger for the 14 to 19 and 65 and over age groups. The principal reasons are the differences in the age distribution of the individual year classes within the 14 to 19 age group, and a lack of job opportunities which reduces the incentive to look for a job. The first reason is partly the result of differences in the number of children born 14 to 19 years ago and partly the result of the out-migration of the 18 and 19 year olds. Participation in the labour force is higher among the 18 and 19 year olds than among the 14 to 17.

The lack of job opportunities is difficult to measure but by combining the low participation rate, the out-migration, and the unemployment rate we get some idea of the ratio of jobs to number of young persons available to fill them. Jobs available for the 14 to 19 year olds in Gloucester County in 1960 were only sufficient to give employment to about 40 per cent of 14 to 19 year olds who would normally expect to be in the labour force.

Industrial Distribution While the sample was not designed to measure changes over time, a comparison of the industrial distribution of the labour force with the 1951 census indicates a considerable decline in the absolute and relative numbers of persons engaged in primary industries. The decrease is probably even larger than the survey indicates since many of the persons who used to work in primary industries in Gloucester County still work in these industries but do so outside of the county for the peak of the season and return to Gloucester County for the winter. Since there has been no significant increases in employment in other industries, the result is obvious: (a) more unemployment, both as to numbers unemployed and length of unemployment; (b) a withdrawal from the labour force by the inexperienced workers who lose the incentive to look for work; (c) withdrawal from the labour force by older people who have been forced out of primary industries and are too old to adapt themselves to new work situations; and (d) an increase in the outward movement of the young and better educated.

From data collected in the sample, it appears that quite a number of persons in Gloucester County work in more than one industry over the period of a year. In addition to the main or first industries worked in during 1959, about 10 per cent of those employed during the year had worked in second and third industries. As might be expected, those working in seasonal industries comprised a substantial part of the total working in more than one industry during the year. In 1959, those who chose agriculture, logging, fishing and construction as their second industry accounted for 35 per cent of all persons who had worked in a second industry during the year. An analysis of the combination of industries worked in by those engaging in more than one industry shows that about 60 per cent of the total worked in one or more of these four seasonal industries as they switched from one industry to another during the year.

Most of those who had worked in secondary industries on the other hand remained in one industry throughout 1959. There was a small amount of industry shifting in fish processing which, of course, would be related to seasonal changes in the primary industry.

The Unemployed In addition to the three-year employment history, all persons 14 years of age and over were asked similar questions to those asked by the DBS in the labour force survey to determine the current labour force status of the population included in the sample. On the basis of this question, 10 per cent of the labour force was classified

as unemployed. This was twice the rate of unemployment existing in the Atlantic provinces as shown by the DBS's labour force survey data for July 1960 which is approximately the same date.

The rates of unemployment among men varied inversely with age; the rate decreased with increasing age. Among boys 14 to 19 years of age, 32 per cent of those in the labour force were unemployed. Unfortunately, regional and national rates of unemployment are not published separately for men and women. For both sexes combined however the 14 to 19 age group in the sample reported an unemployment rate of 23 per cent compared with 11 per cent for Canada as a whole. The majority of these young people were new entrants into the labour force who were looking for their first jobs. It must be remembered however that this high rate of unemployment in itself does not explain the real difficulties which these young people in Gloucester County had to contend with in establishing themselves in the labour market. During the three years immediately preceding the date of the survey, the number of young persons age 14 to 19 who had left the area to obtain employment was equal to 29 per cent of the entire number in this age group participating in the labour force at the time of the survey. There was also some indication that a large number of young people had withdrawn from the labour force. That is, at the time of the survey they were not actively seeking work and were therefore classified as voluntarily idle. By adding the unemployment rate to the low participation rate and the out-migration, it is possible to estimate that of the boys in Gloucester County 14 to 19 years of age less than 40 per cent could expect to get a job in Gloucester County. The remainder were faced either with migration or idleness at home.

Mobility Between 1957 and 1960 a total of 100 persons who were 14 years of age and over had moved out of the households in Gloucester County which were included in the survey. Moving out of the households in this case means moving out of Gloucester County for the purpose of obtaining full-time employment. This number is equivalent to 9 per cent of the labour force in the sample and represents an annual out-migration of 3 per cent per year. As indicated earlier the migration rate among the 14 to 19 however was much larger, nearly 30 per cent. As might be expected the movers were young people with 78 per cent of them under 25 years of age and only 8 per cent above 34 years of age. Half of them were male and 90 per cent were single.

The educational achievement of the movers was higher than for the rest of the Gloucester County population, although not necessarily better than those in the same age groups who stayed behind. Unfortunately, the educational achievement of the non-movers was not obtained. It might be interesting to add however that in a similar study in two labour market areas in Nova Scotia the educational achievement of the movers was considerably higher than those in the same age group who stayed behind. Two thirds of the movers went to Ontario and Quebec, the balance went to other parts of New Brunswick. Only a few went to the United States of America. One third of the movers had no previous work

experience having left the area to find their first job. The remainder had some work experience and most improved their job considerably by moving.

Incidence of Broken Employment Of the 873 persons in the sample, 482 had experienced broken employment; of these 410 were men and 72 were women. In addition, about a dozen persons had a record of sporadic employment that did not meet the definition of broken employment; that is, they had several short periods of less than one month without employment. The incidence of broken employment was higher for men from the rural areas. Of all males with broken employment, 337 lived in rural areas and the incidence rate for rural men was 55 per cent. Among urban male, 73 had broken employment, and the incidence rate was 23 per cent. For all males, both rural and urban, the incidence rate was 44 per cent; the incidence for females was 23 per cent.

Table 15 below shows the incidence of broken employment during the two-year period in Gloucester County by age group and sex.

Table 15 - Incidence of Broken Employment During a Two-Year Period in Gloucester County, by Age Group and Sex

	Age Group						
	<u>14-19</u>	<u>20-24</u>	<u>25-34</u>	<u>35-44</u>	<u>45-54</u>	<u>55-64</u>	<u>65+</u>
<u>Male</u>							
Labour Force (No.)	100	82	183	243	173	107	38
Broken Employment (No.)	47	48	89	105	68	43	10
Incidence of Broken Employment (%)	47	59	49	43	39	40	26
<u>Female</u>							
Labour Force (No.)	78	65	41	36	24	25	1
Broken Employment (No.)	21	19	14	8	7	3	-
Incidence of Broken Employment (%)	27	29	34	22	29	12	-

As can be seen from the table, the incidence rate of broken employment definitely declined with increasing age. For males the rate is higher for the 20 to 24 age group and then declines, while for females it is highest among the 14 to 19 and then falls off in each succeeding age group. One of the reasons for a higher incidence rate among younger men is that the seasonal industries, which contribute a large part to the

incidence of broken employment, have a younger labour force than the non-seasonal industries. Another reason is that the low participation rate among the older age group suggests that a lack of employment opportunities had been responsible for these people retiring somewhat earlier than in other parts of the country.

The incidence of broken employment also varied considerably among the various industry groups and this is shown in Table 16 below.

Table 16 - Incidence of Broken Employment for Men During a Two-Year Period, by Industry of Employment

<u>Industry</u> ⁽¹⁾	<u>Males with Records of</u>		<u>Total</u> No.	<u>Incidence</u> Rate %
	<u>Broken</u>	<u>No Break</u>		
	<u>Employment</u> No.	<u>In Employment</u> No.		
Logging	62	19	81	77
Fishing	48	7	55	87
Mining (all industries)	20	8	28	71
Fish Processing	40	4	44	91
Pulp and Paper Mills	20	106	126	16
Construction	69	19	88	78
Transportation, Water, Railway and Truck	22	24	46	48
Total These Industries	281	187	468	60
All Other Industries	129	319	448	27
Total	410	506	916	45

(1) The industries are those in which the men were mainly occupied in during 1959. The total of 916 men was just 1 per cent below the 926 men in the sample of the labour force at the time of the survey.

The 410 males had a record of broken employment, 281 or 69 per cent had worked in the seven industry groups shown in Table 16. For these seven industries the average incidence rate was 60 per cent. This means that nearly two thirds of the total number of men working in these industries were out of a job for one month or more during the two years prior to the survey date. There is also a close relationship between the seasonal industries and a high incidence of broken employment. The only industries with an incidence of 30 per cent or more are the 'seasonal industries'. The only exception is mining. The reason for the high incidence in this industry is that the only mine which operated in Gloucester County had been closed for considerable time before the survey was taken. Hence, nearly all those persons shown as unemployed in the mining industry had their last employment outside of the county. In other words, there were practically no employed miners within the county.

Educational Achievement All persons who had a record of broken employment were asked to provide the enumerator with information on their education in terms of the school grades completed. This is shown in Table 17 below.

Table 17 - Distribution of Persons Experiencing Broken Employment in Gloucester County by School Grades Completed

	<u>No</u> <u>Education</u>	<u>Grades</u> <u>1-5</u>	<u>Grades</u> <u>6-7</u> (per cent)	<u>Grade</u> <u>8</u>	<u>Grades</u> <u>9+</u>	<u>Total</u>
<u>Men</u>						
Urban	9	27	25	12	27	100
Rural	10	35	27	14	14	100
Total	10	33	27	14	16	100
<u>Women</u>						
Total	1	12	26	23	38	100

Note: Of 482 persons with broken employment 34 did not state their education. Therefore, the above distribution was calculated for a total of 448 persons.

Unfortunately, data on education were not obtained for the employed so that it is not possible to make a comparison. It is interesting to note however that in the study of the educational achievements of unplaced applicants undertaken by the National Employment Service in November, 1955, the proportion of men who had completed Grade 8 or less accounted for 75 per cent of the total in the Atlantic region. This compared with a figure of 70 per cent for Canada as a whole. As can be seen from Table 17 above, 84 per cent of the men in Gloucester County who had had a record of broken employment had Grade 8 education or less. Those in rural areas had somewhat less education than those in urban areas.

Location and Industry of Last Employment Of 410 males with a record of broken employment two thirds had worked in Gloucester County prior to their last broken employment period. An additional 13 per cent had worked in other parts of the province of New Brunswick, 13 per cent had worked in other Canadian provinces, 2 per cent in other Maritime provinces and the remaining 6 per cent either did not state their location of last employment or had no work experience prior to the non-work period.

Of the 410 men who had had a record of broken employment, 71 per cent were employed in the same seven industries listed in Table 16. Except for mining and pulp and paper, the industries listed are highly seasonal. Of the 410 men with a record of broken employment, nearly half worked in the seasonal industries of logging, fishing, fish processing, construction and transportation.

Duration of Last Non-Work Period The duration of the non-work period was extremely long and over 70 per cent of the men had experienced non-work periods of five months or more. Although the number of men living in urban areas who had broken employment was much lower than for rural men, those who did experience broken employment had non-work periods of about the same length as men in rural areas. The average duration of the non-work period for men both rural and urban was 6.3 months.

It must be remembered however that the non-work periods discussed only refer to the last break in employment in a two-year period. In actual fact, most of these same persons had experienced more than one non-work period, some of them three or four, during the two years covered in survey record. The distribution of persons experiencing broken employment is shown in Table 18 below.

Table 18 - Distribution of Persons With a Record of Broken Employment by
Number of Non-Work Periods Over the Two Years
August 1958 to July 1960

	<u>Not Stated</u> (a)	Number of Non-Work Periods					<u>Total</u>
		<u>One</u>	<u>Two</u>	<u>Three</u>	<u>Four</u>	<u>Five</u>	
		(number of persons)					
<u>Male</u>							
Urban	3	36	25	8	1	-	73
Rural	1	60	232	35	7	2	337
Total	4	96	257	43	8	2	410
<u>Female</u>							
Urban	-	12	7	3	1	-	23
Rural	-	15	31	1	2	-	49
Total	-	27	38	4	3	-	72

(a) Principally because of incomplete records.

As can be calculated from the table, 75 per cent of the men had experienced more than one non-work period during the two years preceding the survey date.

Since a two-year employment history was obtained, it is possible to calculate the total amount of time not worked in the two years. The records cover the total of 1,173 persons. If they worked full time, they would have worked about 28,000 months. Instead they worked a little less than 23,000 months or 82 per cent of the time available to them. If, on the other hand, those persons who had at least one work period of one month had worked full time, they would have worked 12,000 months. They actually worked 7,000 months or 58 per cent of the time. In other words, the labour force included in the sample in Gloucester County had worked 82 per cent of the time, while those with a record of broken employment had worked about 58 per cent of the time available. In both these instances, time lost is underestimated because non-work periods of less than one month were not tabulated. In addition, persons who entered the labour market during the two-year period were not available for the whole 24 months so that total number of months is over-estimated. This, of course, results in underestimating the percentage of persons who worked full time. A similar calculation made for Canada as a whole would suggest that time lost through unemployment during the same 24-month period was equivalent to about 4 or 5 per cent of the total number of months which could have been worked if the entire labour force had been employed continuously.

The length of the non-work period can also be related to the industries in which the persons with broken employment had worked prior to the non-work period. This relationship is shown in Table 19 on page 14.

The seven industry groups listed are the same as those listed in Table 16 and together employ 70 per cent of the men with a record of broken employment. Of the men who had worked in these industries, 55 per cent were out of work for four to six months and an additional 31 per cent were out of work seven months or more. Of those who had been employed in logging, fishing and fish processing, at least 90 per cent were out of work for four months or more. Even in other industries which are not shown separately but grouped together in the table, 73 per cent of those men who had experienced broken employment after working in these industries had non-work periods of at least four months in duration.

Training In the Gloucester County study, only five of the 410 males with a record of broken employment had received formal technical training to equip them for their job. Informal training predominating with 209 men or 51 per cent reporting having obtained their skills to informal training on the job. Another large group of 134 men said that they had no training or skill, the balance did not state their training or particular skills.

Table 19 - Duration of Non-Work Periods of Men With Broken Employment, by Industry of Last Employment⁽¹⁾

Industry of Last Employment	Percentage of Men With Non-Work Periods of			
	1-3 Months %	4-6 Months %	7+ Months %	Total %
Logging	9	63	28	100
Fishing	7	69	24	100
Mining (all industries)	25	25	50	100
Fish Processing	10	66	24	100
Pulp and Paper Mills	28	39	33	100
Construction (all)	16	51	33	100
Transportation (water, railway and truck)	19	33	48	100
Total These Industries	14	55	31	100
All Other Industries	27	36	37	100
Total	17	50	33	100

(1) This table, of course, is concerned only with the duration of the last broken employment period the men had experienced.

All persons who had a record of broken employment were asked if they would take training and if so in what trade. Forty-five per cent said they wanted training while 38 per cent said they did not; the remainder either could not make up their minds or did not give any information on the subject. Their willingness to accept training increased with the level of formal education. Of all persons with less than Grade 6 education, 30 per cent said they would take training while persons with Grade 6 or more 57 per cent said they would take training. Of those who said they would take training, about 75 per cent identified the occupations in which they would want training. Of this latter group, nearly two thirds chose motor mechanics, carpentry, welding and mechanical apparatus occupations. The limited range of occupations in which these persons wanted training does not necessarily mean that they would accept nothing else. It is largely the result of a limited knowledge of the wide range of occupations found in larger urban labour markets.

Activity During the Non-Work Period The reason for asking persons who had a record of broken employment about their activity during the most recent non-work period was not just idle curiosity. It was to throw some light on the effect which the existence of small holdings of land might have on people who are without employment, particularly during the winter months. Consequently, the activities recorded were grouped into two different types of activities, that is, those which you might call 'productive' and those that were 'non-productive'.

Table 20 - Men with a Record of Broken Employment by
Activity During Latest Non-Work Period

<u>Activity</u>	<u>Number of Men</u>
Worked Around the House	63
Cut and Split Wood	43
Worked Around a Farm	16
Worked Here and There for Pay	17
Repaired Fishing Gear	<u>12</u>
Total with Some Productive Activities	151
Did Nothing	175
Collected Unemployment Insurance Benefits	27(1)
Looked for Work	14
Other and No Information	<u>43</u>
Total with Non-Productive Activities	259

(1) This is not the total number in receipt of benefits, but simply those who said they had no other activity except collecting their benefits. Of the 410 men with broken employment records, at least 317, or 77 per cent of the total, received benefits during their last non-work period.

Of the 410 men with a record of broken employment, it can be seen that 259 or 63 per cent had very little to do in their non-work period. However, 151 or 37 per cent were involved in activities which could have reduced their incentives to look for or accept job, particularly a temporary job. The fisherman who does not spend at least one month during the winter repairing his gear is unlikely to be in a position to take advantage of an early fishery, nor is he likely to maximize his returns during any part of the season if his gear is in poor condition. Most of the other activities either provided some immediate cash income or income in kind. Those who said that they worked around the house did a large variety of things ranging from helping with the daily household chores to practically building a house. Generally speaking, however, working around the house consisted of doing internal repairs. To establish the effect of activities around the house on availability for jobs the answers on the question on availability and the questions on activity were related. This can be seen in Table 21 on page 16.

Only five men considered that their productive activities during the non-work period would have prevented them from taking a job. It would be reasonable to conclude that activities around the farm and fishing enterprise do not deter people from other employment during the seasonal layoff period. A certain degree of caution however is

Table 21 - Relationship Between Activity and
Availability for Employment

<u>Activity</u>	<u>Activity During</u> <u>Non-Work Period</u>	<u>Not Available</u> <u>For Job</u>
	(Number of men)	
Worked Around the House	151	1
Cut and Split Firewood	43	0
Worked Around Farm	16	2
Worked Here and There for Pay	17	0
Repaired Fishing Gear	12	2
Total	151	5

necessary. The respondents said they were available or not available to take a job. Those who are familiar with personal interviews know that respondents very often say what they think they should rather than what they really believe. This may be especially true in this case when respondents were drawing unemployment insurance benefits during the non-work period. Availability for work is, of course, a prerequisite for receiving unemployment insurance benefits. Furthermore, they may feel a sort of moral obligation to say that they are available for work.

Availability for Employment As already mentioned, persons with a broken employment record were asked if they were available for employment during the non-work period. Of the 410 men who had broken employment, 363 or 89 per cent said they were; the rest either did not know or did not give the information. Of the 27 who gave a reason for not being available, 11 said they were ill. Had their illness lasted for the entire non-work period, they would not have been included as having a record of broken employment. In spite of the fact that their illness had not lasted the whole of the period, they still considered themselves unavailable for employment during the whole period.

Looked for Work All persons who said they were available for employment were asked if they had actually looked for a job during the non-work period. The reasons for asking this question were to compare the results with those of the labour force survey conducted each month by the DBS. The instructions given to the enumerators were borrowed from the DBS and are those used in connection with the labour force survey. Since these instructions were not given by one of the Bureau's own instructors, it is possible that they were not interpreted correctly.

The two labour force survey questions used by the DBS to determine the current labour force status of the respondents are: "What did you do mostly last week?" and "Did you do anything else?" It is doubtful whether these two questions can be used to determine the labour force status of the respondent for a non-work period of three or four months' duration which occurred some six months prior to the interview date. Hence, to determine the labour force status of those with a record of broken employment, and also to increase our understanding of the problems associated with the measurement of unemployment, those respondents who said they were available for work were asked: "Did you look for work?" The question was specifically tied to the latest non-work period of at least one month's duration.

In the questionnaire no attempt was made to establish what time during the non-work period the looking 'took place'. It would be quite unrealistic to expect a person to look for a job the largest part of the time for a period as long as six months. In a labour market with as few large- and medium-sized firms as there are in Gloucester County, a person could exhaust all job possibilities in three or four weeks. The author who conducted many of the interviews was unable to obtain satisfactory information on this point because respondents were unable to remember how long they looked for work within a reasonable degree of accuracy. It should be remembered also that a large number of these workers have very little education and no training and that this would severely restrict their area of work seeking.

As mentioned previously, 383 men or 89 per cent of all men with a record of broken employment included in the sample said that they were available for work. Of these, 223 or 61 per cent reported having looked for work during their most recent non-work period. Of the 160 men who did not look for work, 82 said they thought there was no work available while another 23 said they knew there was none available. In all, 105 men did not look for work because they either knew or thought they knew that there was no jobs to be had.

This means then that of the 383 men available for work, 328 or 86 per cent were 'seekers', 283 were 'active' and 105 'passive' seekers. This means that of the 410 men with a record of broken employment, 328 or 80 per cent could satisfy the criteria of 'unemployed' under the labour force survey concept.

Of the 223 men who looked for work, 60 or 27 per cent considered registration at the local office of the National Employment Service as looking for work. It should be pointed out here that the majority of the persons in the sample who had received unemployment insurance benefit during their non-work period were postal claimants and hence did not visit the National Employment Service offices after they had registered in the fall. Most of the other men who had looked for work had looked by going to logging camps, construction sites, pulp mills, sawmills or any other establishment where a job might be found. Thirteen had gone out of the province, mostly to Ontario and Quebec, in an attempt to find employment.

The extent of looking for work was related to the age of the looker; the results are shown in Table 22 below.

Table 22 - Distribution of Men With Broken Employment, by Age Group and by Those Looking for Work

<u>Age</u>	<u>Total with</u> <u>Broken Employment</u>	<u>Number Looking</u> <u>for Work</u>	<u>Percentage</u> <u>of Total</u>
	No.	No.	%
14-19	47	21	45
20-24	48	30	62
25-34	89	55	62
35-44	105	55	52
45-54	68	38	56
55-64	43	24	56
65+	10	-	-
Total	410	223	54

The very young and very old did not look for work as actively as the middle age groups -- which we normally call the primary participants in the labour force.

Looking for work can mean different things to different men. It would be quite unrealistic for an unskilled man to look for a job as a skilled tradesman and expect to find one. The reverse, of course, is not true. Many people who are skilled in occupations which have become obsolete or for which there has been a decrease in demand have been forced to look for and accept unskilled jobs. In the survey, three questions were asked to shed some light on this aspect of behaviour of persons who are looking for work. These three questions are: (1) What is your principal occupation? (2) Do you normally work in this occupation? and (3) What kind of a job would you have accepted?

Of the 410 men with a record of broken employment, 334 or 82 per cent said they worked in their usual occupations; 21 men or 5 per cent of the total said that they did not, 10 per cent gave no information and the remainder had had no previous work experience. While many occupational shifts were experienced by the men with broken employment, most of them were from one unskilled occupation into another.

Of the 223 men who looked for work during their most recent non-work period, 150 or two thirds said they would accept any kind of a job. An additional 46 men or one third said that they would only accept a job in their own trade. Most of the latter group were, of course, skilled or semi-skilled tradesmen.

Incomes Income data for those with broken employment periods were obtained for the 12 months prior to their most recent non-work period and for the non-work period itself. For the latter, the information is for the average income per month over the non-work period. The reason for obtaining this information is to give an impression of the incomes available to persons before leaving their employment and also to give an idea to the extent of the income support these people had during their non-work period.

Income was divided into five main components; wages, pensions, family allowances, unemployment insurance benefits and income from other sources. Gifts and windfall profits were excluded. For the 445 persons for whom complete 12-month income data were obtained, the total income for a year prior to their non-work period was \$866,079. This averaged to \$1,946 per person or about \$152 per month. It should be mentioned that, of course, 19 of these people had no income at all. For those who received any income, the average was \$2,033. The distribution of this income by income class is shown in Table 23 below.

Table 23 - Distribution of Persons with Broken Employment, by Income Class for Twelve Months Prior to Their Last Non-Work Period

Income Class \$	Number of Persons					
	Male		Female		Total	
	No.	%	No.	%	No.	%
0-999	72	17.5	32	44.4	104	21.6
1,000-1,999	104	25.4	34	47.2	138	28.6
2,000-2,999	129	31.5	3	4.2	132	27.4
3,000-3,999	43	10.5	1	1.4	44	9.1
4,000-4,999	22	5.4	-		22	4.6
5,000+	5	1.2	-		5	1.0
Not Stated	35	8.5	2	2.8	37	7.7
Total	410	100.0	72	100.0	482	100.0

Only 22 per cent of persons who experienced broken employment had incomes above \$3,000 for the 12 months prior to their last non-work period. Among the men, nearly 75 per cent had total incomes of less than \$3,000 and among the women 95 had received incomes of less than \$3,000. It is also interesting to look at the distribution of income by source of income and income class. This information can be seen in Table 24 below.

Table 24 - Twelve-Month Income of Persons With Broken Employment,
by Source of Income, Both Sexes

<u>Income Class</u> \$	<u>Number of Persons</u>	<u>Wages</u>	<u>Unemployment Insurance</u>	<u>Family Allowance</u> (Percentages)	<u>Pensions</u>	<u>Other</u>	<u>Total Income</u>
0-999	104	76	17	6	1	-	100
1,000-1,999	138	73	17	8	1	(a)	100
2,000-2,999	132	71	16	10	1	2	100
3,000-3,999	44	83	8	8	1	-	100
4,000+	27	84	6	7	2	1	100
Total	445	76	14	8	1	1	100

(a) Less than $\frac{1}{2}$ of 1 per cent.

Income from wages accounted for about 76 per cent of total income received in 12 months; unemployment insurance and family allowances made up practically the rest of the amount. For those with total incomes of less than \$3,000, unemployment insurance and family allowances accounted for 23 to 26 per cent of total income.

Also of interest is the actual amount of money represented by the percentage distribution, and this is shown in Table 25 on page 21.

In the 12 months prior to the last non-work period, the men's incomes from all sources averaged \$2,109. Only 70 of them or 19 per cent had incomes above \$3,000. On average, the men received about \$300 in unemployment insurance benefits, which equalled about 19 per cent of the average income earned through wages.

Table 25 - Twelve-Month Income of Males With Broken Employment,
by Income Class and Main Sources of Income

Income Class \$	Number of Men	Wages	Unemployment Family (1)				Total Income
	No.		Insurance	Allowance	Pensions	Other	
			(Average per man in dollars)				
0-999	72	328	83	46	5	-	462
1,000-1,999	104	1,063	308	150	20	5	1,546
2,000-2,999	129	1,741	413	240	27	22	2,443
3,000-3,999	43	2,858	287	274	39	16	3,474
4,000+	27	4,155	311	319	79	38	4,902
Total	375	1,583	299	188	26	13	2,109

(1) Family allowances were credited only to family heads, but the above averages include all of the men. The average family allowance received per family head was about \$280. This is shown in Chapter 6 in an analysis of family incomes.

Men living in rural areas averaged slightly higher incomes than those in urban areas. This is shown in Table 26 below.

Table 26 - Twelve-Month Income of Men With Broken Employment in Urban
and Rural Areas, by Main Source of Income

	Number of <u>Men</u>	<u>Wages</u>	<u>Unemployment</u> <u>Insurance</u>	<u>Family</u> <u>Allowance</u>	<u>Pensions</u>	<u>Other</u>	<u>Total</u>
			(Average per man in dollars)				
Urban	67	1,671	165	93	37	1	1,967
Rural	308	1,564	328	208	24	16	2,140
Total	375	1,583	299	188	26	13	2,109

Although the average wage of the 12-month period was higher for those in urban areas, unemployment insurance benefits and family allowances were significantly higher for those in rural areas. Receipts for these two sources resulted in a higher total income for men from rural areas.

Of the 410 with a record of broken employment, average monthly income was calculated for 384, whose monthly income during their latest non-work period averaged \$97. For men in rural areas, it was \$100 and for those in urban areas, it was \$83. Unemployment insurance accounted for the bulk of the income during the non-work period. It is interesting to note that the income men received when they were out of work averaged approximately half that of their incomes prior to the non-work period. In this comparison one must hasten to add that a number of these men were also out of work at one time or another during the 12 months prior to the last non-work period.

The survey suggests that the income of the men with broken employment did not vary significantly with the length of the non-work period, provided that it was not more than eight months. For those with non-work periods of eight months or less, the average monthly income was about \$108. The average monthly income dropped very sharply after eight months of unemployment. There were 47 men in this latter category and their monthly income amounted to only \$38 per man. There are three principal reasons for this: (1) the exhaustion of insurance benefit; (2) several young men in this group had never worked and hence were not entitled to unemployment insurance benefits. Since they were supported by their parents, did not receive welfare benefits either; and (3) a few men who might be better classed as unemployable are also included in this group.

Heads of Families who had Experienced Broken Employment

Definition For a description of family characteristics in this survey, it was decided to use as a basic unit the concept of an economic family. This is defined as a group of two or more persons living together and related to each other by blood, marriage or adoption. It differs from the normal 'immediate' family whose members must be related through marriage. The economic family could therefore consist of two brothers or sisters living together, it could consist of the normal immediate family or it could be a group of what is usually thought of as two families living together, that is, a father and mother living with their son and daughter-in-law and grandchildren. Thus, the term 'economic family' is broader and may include more persons in the group than an 'immediate family'.

Of the 410 men with a record of broken employment, 266 were family heads; there were two women with records of broken employment who were also family heads. Of the 268 family heads with a record of broken employment, 42 per cent were 45 years of age and over.

Home Ownership Of the 268 family heads with a record of broken employment, 211 or 79 per cent owned their homes completely; 31 families rented, and 24 were making mortgage payments on their homes. An additional two families lived in rent-free homes, that is, homes owned by relatives in which these families lived free of charge, although they may have contributed to the repair and maintenance of the structure.

The rural-urban distribution of home ownership shows that a larger proportion of rural families, 84 per cent, owned their home, compared with 52 per cent for the urban family. Monthly rentals and mortgages were low; 41 of the 55 families paying rent or mortgages paid less than \$60 a month.

Additional Wage Earners In addition to the 268 family heads, there were 130 other wage earners in the family. Therefore, nearly 400 persons were active wage earners. In addition, there were 41 persons among the 268 families receiving old age pensions. If we add 41 pensioners to the 268 family heads and 130 other wage earners in the families, this gives a total of 439 or about half of the total 866 persons 14 years of age and over who received incomes from one source or another.

Family Income Income information was gathered in the survey for household heads who had experienced a period of broken employment and other wage earning members of the household. The information on income was summed for the whole economic family.

Detailed information on income by income class for urban and rural families is shown in Table 27 below.

Table 27 - Economic Families in Urban and Rural Areas by Distribution of Total Income for 12 Months Prior to Broken Employment Periods of Family Heads

Income Class \$	Number of Families					
	Urban		Rural		Total	
	No.	%	No.	%	No.	%
0-999	-	-	10	4.4	10	3.7
1,000-1,999	8	19.0	46	20.3	54	20.2
2,000-2,999	18	42.9	68	30.1	86	32.1
3,000-3,999	6	14.3	42	18.6	48	17.9
4,000-4,999	5	11.9	23	10.2	28	10.4
5,000+	3	7.1	21	9.3	24	9.0
Not Stated	2	4.8	16	7.1	18	6.7
Total	42	100.0	226	100.0	268	100.0

About 75 per cent of both rural and urban families had incomes ranging from less than \$1,000 to \$3,999 per year. Nearly 19 per cent of the families are in incomes ranging from \$4,000 to \$5,000 and over.

Also interesting to compare is the distribution of income by source of income and this comparison is made in Table 28 below.

Table 28 - Economic Family 12-Month Income, by Income Class and Percentage Distribution of Each Source of Income

<u>Income Class</u>	<u>Number of Families</u>	<u>Wages</u>	<u>Unemployment Insurance</u>	<u>Family Allowance</u>	<u>Pensions</u>	<u>Other</u>	<u>Total Income</u>
\$	No.		(Percentages)				
0-999	10	54	22	24	-	-	100
1,000-1,999	54	60	20	15	5	-	100
2,000-2,999	86	64	18	11	6	1	100
3,000-3,999	48	74	12	9	5	-(1)	100
4,000-4,999	28	79	9	7	5	-	100
5,000+	24	87	6	4	2	1	100
Total	250	73	13	9	4	1	100

Speaking generally, as incomes rose higher proportions of the total came from wages earned and smaller proportions from security payments such as unemployment insurance and family allowances. Families with incomes of less than \$1,000 received 46 per cent of their income from family allowances and unemployment insurance benefits, while those with incomes of \$5,000 and over received only 10 per cent of their incomes from these sources. Families in the middle income range from \$3,000 to \$3,999 received 21 per cent of their income from insurance benefits and family allowances. Nearly three quarters of the family heads with broken employment periods had incomes under \$200 per month during their last non-work period.

Supplementary Income from Farm, Fishing and Woodlots

In the part of the survey questionnaire pertaining to the household, respondents were asked the amount of income in cash and kind which they received from the production of agricultural, fishery and wood products during 1959. This income was recorded only for those families whose heads did not rely on primary industries for their main

source of income. In the case of a family head whose main source of income was from one of these activities, this income was included as principal income and is included in Table 28.

Since the income from primary industry operations was not added to the total family income for those heads who engaged in primary operations only on a part-time basis, supplementary income represents additional income to family heads who were without employment. The reasons for not adding this additional income to the 12-month income from other sources is that the latter was not calculated for the year 1959 but applied instead to the 12 months immediately preceding the period during which the head of the family became unemployed. Another reason that the Committee is interested in examining this item separately is to see whether it is sufficiently important to impede mobility. Furthermore, supplementary income information is probably not as reliable as other income data secured during the survey. In most cases it was necessary to estimate income from sales of agricultural products, fish and woodlots, as no records were kept by the respondents as to exact quantities and values.

Of the 268 families in the Gloucester County, 84 per cent lived in rural areas, and 102 families or 45 per cent received income from the consumption or sale of agricultural products, fish products and wood products. Thirty-three families sold primary products for \$33,536 or an average of \$1,016 per family. In addition, a total of 102 families reported consuming primary products valued at \$22,971 or \$225 per family. Thus, the total value of primary products in cash and kind in 1955 amounted to \$56,507 or an average per family of \$549 for 102 families reporting selling or consuming these products.

CHAPTER IV

Seasonal Unemployment

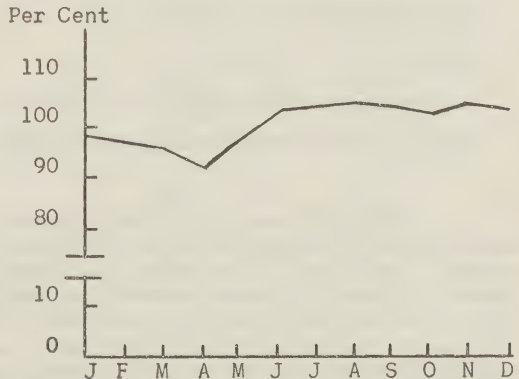
Although this chapter is primarily concerned with seasonal unemployment, it would be incomplete without first examining seasonal variations in employment; it is from these variations that seasonal unemployment results. A word of caution, however, must be introduced. Not all persons who leave the 'employed' status become 'unemployed'; some, instead, leave the labour force. It might be appropriate to define these terms in a technical sense. The employed are those persons who have a job and are at work, or have a job but are not at work because of such factors as vacations, illness, bad weather or an industrial dispute. The unemployed are persons who are not working and are actively looking for work. These two categories, the employed and the unemployed added together make up the labour force.¹

Seasonal Variations in Employment

It is estimated that the net seasonal change in total employment between summer peak and winter trough in the province of New Brunswick has averaged about 20 per cent over the past ten years.² This means that nearly 30,000 fewer persons are working in winter than in summer.

Since data showing total employment are not available, the index of 'industrial' employment is used to show graphically the seasonal pattern of average employment in New Brunswick from 1950-1960. Chart 3 shows the rhythmic pattern of industrial employment in New Brunswick for this period.

Chart 3 - Seasonal Index of
Industrial Employment, Average
1950-1960



Source: Employment and Payrolls, DBS
Special Tabulations.

- ¹ For more detail see: (a) Report of the Committee on Unemployment Statistics, Ottawa, August 1960; and (b) 'The Labour Force', November 1945-July 1958, Reference Paper No. 58, 1958 Revision, Dominion Bureau of Statistics.
- ² This estimate is calculated by comparing the seasonal amplitude of the 'industrial composite' employment with Canada total and allowing for importance of primary industries. See Appendix D for details.

The seasonal pattern is very obvious. The trough of industrial employment occurs in March and April and the peak occurs in the July-August-September period. There was no significant change in the pattern of total employment variations between 1950 and 1960. There were changes in the seasonal pattern of individual industries but these were not large enough to change the seasonal pattern of total employment.

There are large differences in the extent of seasonal variations in employment among the major industry group. This is shown in Chart 4.

Chart 4 - Average Seasonal Amplitudes of Industrial
Employment Variations, New Brunswick, 1950-1960

	Per Cent										
	0	10	20	30	40	50	60	70	80	90	100
Forestry	X	X	X	X	X	X	X	X	X	X	X
Manufacturing	X	X	X								
Construction	X	X	X	X	X	X	X	X	X		
Transportation	X	X	X	X	X	X					
Trade	X	X	X								

Source: Employment and Payrolls, DBS, Special Tabulations.

The differences in the seasonal variations in employment among these industry groups are quite obvious. The forestry industry has, of course, the widest fluctuation. The ranking of these five industry groups in terms of their seasonal swings, however, does not necessarily correspond to their numerical contributions to seasonal unemployment. This would depend partly on their size and partly on the extent to which workers in the industry remained in the labour market, either because they had found work in other industries, or because they continued to seek work. Persons who leave the labour force voluntarily are not counted as unemployed.

Two industries which are not included in Chart 4 and are highly seasonal are agriculture and fishing. They are not included because there are no monthly figures on employment in these industries for New Brunswick. From national statistics the seasonal swing in agricultural employment has been calculated at 36 per cent and 126 per cent in fishing employment. The seasonal swing in agricultural employment in the Atlantic region is about 33 per cent.

Table 29 below shows the seasonal amplitudes, and peak and trough indexes of industrial employment in 1950 and 1960.

Table 29 - Seasonal Amplitudes and Peak and Trough Indexes
of Industrial Employment, New Brunswick,
1950 and 1960

<u>Industry</u>	<u>1950</u>	<u>1960</u>
<u>Forestry</u>		
Peak	147.1	135.0
Trough	50.5	33.9
Amplitude	96.6	101.1
<u>Manufacturing</u>		
Peak	107.6	108.4
Trough	92.3	92.7
Amplitude	15.3	15.7
<u>Construction</u>		
Peak	125.8	118.1
Trough	67.9	77.1
Amplitude	57.9	41.0
<u>Transportation, Storage and</u>		
<u>Communication</u>		
Peak	118.7	123.4
Trough	89.5	88.9
Amplitude	29.2	34.5
<u>Trade</u>		
Peak	110.5	109.6
Trough	94.6	95.9
Amplitude	15.9	13.7
<u>Industrial Composite</u>		
Peak	105.0	105.1
Trough	91.6	90.3
Amplitude	13.4	14.8

Source: Employment and Payrolls, DBS, special tabulations.

It can be seen from Table 29 that the seasonal amplitude of the construction industry has declined considerably over the decade from 57.9 per cent in 1950 to 41.0 per cent in 1960. The amplitude of the trade industry has also narrowed somewhat, while that of the forestry and transportation industries have increased. It is difficult to explain the large drop in the seasonal amplitude of the construction industry in New Brunswick, since over the same period the seasonal amplitude of the construction industry for Canada as a whole declined only slightly from 38.5 per cent to 36.0 per cent. It may be partly because of the size of the amplitudes themselves. In both cases, the whole of the reduction in seasonality occurred as a result of a large increase in the amount of winter work done in the 'highways, bridges and streets' sector of the construction industry. Between 1950 and 1960

the seasonal amplitude of employment in that sector of the industry in New Brunswick dropped from 67.2 per cent to 49.9 per cent. This is principally the result of the development of new earth-moving machinery and new techniques in the handling of cement during the winter months. The national campaign to increase winter employment and the introduction of the municipal winter works incentive program also had some effect.

The extent of the seasonal swings in a province or region is determined not only by the seasonal swings in the various industries but also by the importance of the seasonal industries. Table 30 below compares the industrial distribution of employment for Canada and New Brunswick for June 1960.

Table 30 - Percentage Distribution of Industrial Employment,
New Brunswick and Canada, June 1960

	<u>Canada</u>	<u>New Brunswick</u>
Agriculture	11	11
Fishing	*	2
Forestry	2	6
Mining	2	1
Manufacturing	25	16
Construction	8	7
Transportation, Storage and Communication	7	9
Public Utilities	1	1
Finance, Insurance and Real Estate	4	2
Trade	16	16
Service	24	29
Total	100	100

* Less than 1 per cent.

Source: (1) New Brunswick data in Table 38, Appendix B.
(2) Canada totals are taken from the Labour Force Survey, DBS, unpublished data.

The seasonal industries, agriculture, fishing, forestry and construction, account for 26 per cent of industrial employment in New Brunswick compared with 22 per cent in Canada. This comparison only tells part of the story since some of these seasonal industries have a wider amplitude in New Brunswick than they have for Canada as a whole. Furthermore, the seasonal swing in the manufacturing industry which is only about 4 per cent for Canada is 15 per cent for New Brunswick. The principal reason for this is the greater importance of the highly seasonal food processing component in total manufacturing in New Brunswick. In the Canada total, food processing accounts for

approximately 10 per cent of manufacturing employment, while in New Brunswick food processing accounts for nearly 25 per cent of total. Since industries processing food are usually situated in small towns near the sources of raw material, employment opportunities during the off seasons are very limited.

Seasonal Layoffs

Chart 5 shows the average seasonal 'disemployment' in five industry groups for 1955-1959.

Chart 5 - Average Seasonal Disemployment
New Brunswick, 1955-1959

	Thousands of Persons										
	0	2	4	6	8	10	12	14	16	18	
Agriculture and Fishing	X	X	X	X	X	X	X	X			
Forestry	X	X	X	X	X	X	X	X	X	X	
Construction	X	X	X	X	X						
Manufacturing	X	X	X	X	X						
Trade	X	X	X	X	X						
Service	X	X	X	X							

Source: Estimated from 'Employment and Payrolls' and 'Labour Force Survey', DBS publications, and unpublished data from the latter survey.

Note: 'Disemployment' is the total number of workers laid off seasonally from a specific industry.

These are estimates of the extent to which seasonal layoffs takes place in these industries. The large drop in agricultural employment from summer to winter is not matched by a similar increase in the seasonally unemployed from the agricultural sector. There are three principal reasons for this: (1) many persons who work on farms in the summer have non-labour force activities in the winter, for example, students and housewives; (2) many own-account farmers retire during the inactive season; they have worked a full year both in terms of hours and

income during the active season; and (3) some farmers work in non-farm activities such as construction, logging, fishing, etc., after the harvest and are then counted as being unemployed from these industries.

Those employed in logging and fishing tend to behave in a similar fashion but to a much lesser degree. For all other industries, the number of seasonal layoffs approaches the number seasonally unemployed. This is particularly true when the work-force of an industry has a high proportion of men, a high proportion of skilled workers and when the seasonal layoffs are for short periods.

Local Differences in Seasonal Variations

Lack of monthly employment data for the various labour markets in New Brunswick makes it difficult to give an adequate picture of employment variations in individual labour markets. From the industrial composition of a labour market, it is possible to calculate the approximate seasonal swing in its work-force. Census data give a good snapshot of the industrial distribution of employment in sufficient detail to cover all of the labour markets in New Brunswick. While changes take place over time, these can be allowed for in the analysis provided the analyst is sufficiently familiar with local developments.

Seasonal Variations in Unemployment

The amount of seasonal unemployment in any particular labour market depends upon several factors. The following, however, are probably the most important: (1) the size of the labour market; (2) the proportion of the labour force employed in primary industries; (3) the existence of a larger labour market nearby which offers employment in the winter; and (4) the labour market behaviour of persons laid off for seasonal reasons. It may be difficult to measure the effect of these factors in any one particular market, but their existence is no less real.

Table 31 on page 7 shows the importance of the primary industries in the 11 labour market areas of New Brunswick.

Only the Saint John and Moncton National Employment Service (NES) local office areas have less than 25 per cent of their labour force employed in the seasonal primary industries.

Only persons who reside near the Saint John metropolitan area can be considered as being in a large labour market where winter employment is at a relatively high level. Essentially, this means only those persons within the Saint John NES area itself which, of course, extends somewhat beyond the boundaries of the metropolitan district. Persons residing in all the other labour market areas shown in Table 31 are not likely to find very many alternative employment opportunities if laid off for seasonal reasons during the winter. If, however, more jobs were

available in the Saint John area than can be supplied by the local market, persons living in other parts of the province would no doubt move to Saint John during the winter months.

Table 31 - Percentage Distribution of the Labour Force in Each of the 11 NES Local Office Areas in Selected Industries, New Brunswick, 1951

<u>L.O. Areas</u>	<u>Primary</u> ⁽¹⁾	<u>Manufacturing</u>	<u>Other</u>	<u>All Industries</u>
Bathurst	44.3	19.8	35.9	100.0
Woodstock	43.1	13.2	43.7	100.0
Minto	41.1	10.6	48.3	100.0
Sussex	39.5	12.9	47.6	100.0
Edmundston	39.4	15.6	45.0	100.0
Newcastle	36.6	17.2	46.2	100.0
Campbellton	29.1	25.4	45.5	100.0
St. Stephen	29.0	30.9	40.1	100.0
Fredericton	28.1	14.7	57.2	100.0
Moncton	23.5	17.7	58.8	100.0
Saint John	7.5	19.4	73.1	100.0
New Brunswick	28.0	18.4	53.6	100.0

Source: Census of Canada, 1951, Volume IV.

(1) Excludes mining.

The labour market behaviour of persons seasonally laid off affects the measured level of seasonal unemployment, since by conventional definition a man is only unemployed if he is seeking a job. The intensive study of the New Glasgow, Sydney and Truro labour markets suggests that persons laid off in the fall do not look for work until spring since in small labour markets job vacancies are well known.

The Extent of Seasonal Unemployment

From what industries do the seasonally unemployed come, to what occupations do they belong, what are their skills, how old are they and how long have they been unemployed? The rest of this chapter examines the characteristics of the seasonally unemployed during the winter in New Brunswick and attempts to answer these questions.

In this chapter, it is assumed that the net change in 'unemployment' from summer 'trough' to winter 'peak' represents the 'seasonally unemployed'. This method obviously excludes some people who are seasonally unemployed and includes others who are unemployed for non-seasonal reasons. However, it yields results which the Committee considers adequate for a general discussion of the characteristics of the seasonally unemployed.

The only data relating to unemployment in New Brunswick come from the operations of the Unemployment Insurance Act. The data used are registrations for employment at the NES offices located in New Brunswick. There is no need to discuss the merits or otherwise of the NES registrations as a measure of the level of unemployment. This was done in Chapter 3 and has also been discussed extensively.³ It would be unfortunate if, as a result of these discussions, people were left with the impression that these data have little relevance to the study of unemployment. It has been found by people who have studied the two unemployment series that a fairly close relationship exists between the number of NES registrations and the Labour Force Survey group called the 'unemployed' for men in the labour force sometimes called the 'primary participants'.⁴ Most of the 'seasonally unemployed' men fall within this group. Since those affected by seasonality are mostly men, the analysis which follows is concerned exclusively with them. This is not to say that women are not affected by seasonal fluctuations in employment but that the principal seasonal industries are male industries.

When comparing the NES registrations and the Labour Force Survey unemployed for Canada totals, it was also found that the occupational distribution of the two series were almost identical, although the actual numbers varied. Hence, all data included in this chapter are presented in terms of percentage distribution only. In order to minimize the effect of non-seasonal factors, the data were averaged for four years, 1957-1960.

Seasonal increases in male registrations in New Brunswick have averaged about 28,000 over these four years. This is equivalent to about 16 per cent of the total New Brunswick labour force; the comparable figure for all of Canada is 4 per cent.

Labour Market Differences in Seasonal Unemployment

Differences in the industrial distribution of the labour force in the various NES local office areas have already been discussed. The relationship between the primary industries and seasonality was also pointed out. Table 32 on page 9 gives the seasonality for nine of the local office areas.

The differences between the areas are quite obvious. Saint John not only has the lowest amplitude but also has its peak somewhat later than the other areas; most areas have their peak unemployment in February or March while Saint John has its peak in April or May. This is because of the port activities. Edmundston has experienced the largest seasonal amplitude, although Woodstock and Bathurst are not far behind.

³ See report of the Committee on Unemployment Statistics, Ottawa, August 1960.

⁴ "Les Statistiques du Chômage", Pierre Harvey, L'Actualité Économique, Montréal, Octobre-Décembre 1960.

Table 32 - Seasonal Amplitude of the Registrations in Nine
Local Office Areas in New Brunswick, 1956-1957

<u>Local Office Areas</u>	<u>Trough Index</u>	<u>Peak Index</u>	<u>Seasonal Amplitude</u>
Bathurst	23.7	222.6	198.9
Campbellton	37.9	201.2	163.3
Edmundston	21.3	243.1	221.8
Fredericton	56.1	176.6	120.5
Newcastle	42.6	189.4	146.8
St. Stephen	46.5	162.5	116.0
Woodstock	33.8	212.2	187.4
Saint John	85.1	123.1	38.0
Moncton	45.2	185.9	130.7

Source: Dominion Bureau of Statistics, special tabulations.

Industries of the Seasonally Unemployed

It is difficult to be precise about the contribution which the various industries make to the seasonally unemployed. Using various estimates, it is possible to indicate roughly the contribution which the major industry groups make to the pool of the seasonally unemployed. Table 33 below shows this distribution.

Table 33 - Percentage Distribution of Seasonally Unemployed
Men in New Brunswick by Industry

<u>Industry</u>	<u>Per Cent</u>
Primary	30
Manufacturing	12
Construction	40
Service, Trade, Insurance & Finance	8
Transportation & Public Utilities	10
All Industries	100

The two most important groups are construction and the primary industries. Since food processing accounts for a substantial part of the manufacturing sector, it can be seen that construction, the primary industries, and food processing are directly responsible for nearly

80 per cent of the seasonal unemployment in New Brunswick. Indirectly they probably account for 90 per cent of the total. The importance of this fact cannot be over-emphasized when a reduction in seasonal unemployment is sought.

Occupations of the Seasonally Unemployed

Nearly all occupation groups are represented among the seasonally unemployed, but some groups are found in greater numbers than their size in the employed sector would indicate. Those occupations that are closely associated with the seasonal industries are more widely represented than those linked with non-seasonal industries. The most predominant group is the construction group of occupations. Within the construction group itself, however, some trades are subject to wider seasonal fluctuations than others.

Table 34 below shows the percentage distribution of the seasonal increase in male registrations.

Table 34 - Percentage Distribution of the Seasonal Increase in Male Registrations by Occupational Group, Canada and New Brunswick, Average 1956-1961

	<u>New Brunswick</u>	<u>Canada</u> ^(a)
	(Per Cent)	
<u>Skilled and Semi-Skilled Occupations</u>		
Professional, Semi-Professional and Managerial	0.7	0.8
Clerical and Sale	1.7	2.9
Service and Trade	4.1	6.0
Primary Industries	28.0	15.9
Manufacturing	0.8	1.7
Metalworking and Mechanical	2.8	5.1
Construction	13.6	18.4
Transportation	9.6	9.6
Miscellaneous	2.9	2.0
<u>Unskilled Occupations</u>		
Food and Tobacco	5.4	1.8
Lumber and Lumber Products	3.6	5.4
Construction	21.3	22.0
Others	5.4	8.4
<u>All Occupations</u>	99.9	100.0

(a) 1954-1959 average.

The importance of the primary sector is understated for two reasons: (1) because agricultural employment is not insurable, and (2) because the processing of the products of the primary industries is included with manufacturing. Even then, occupations in primary industries account for one third of the increase in male registrations.

The next largest group of occupations found among the 'seasonally unemployed'⁵ is the construction group. If the skilled and semi-skilled construction workers are added to the unskilled group, they account for 35 per cent of the seasonally unemployed.

The primary and the construction groups account directly for nearly three quarters of the seasonally unemployed. In addition they also induce seasonality in other occupational groups; this is particularly true of the food processing and transportation occupations.

Within these broad occupational groupings, there are important variations in the extent to which individual trades are affected by the seasonal factor. It might be useful to examine these in greater detail.

Professional, Semi-Professional and Managerial Occupations This group of occupations is understated in the registrations, so that its actual contribution to the pool of seasonally unemployed is also understated. The variation in registrations between summer and winter does give a reasonable guide to the extent of the seasonal influence on employment in these occupations. From 1956-1961, registrations in the professional, semi-professional and managerial group of occupations showed some seasonal variations. Registrations in the winter months were 150 per cent above summer registrations. This is a very modest seasonal variation compared with some of the other groups, as will be shown below.

Clerical and Sales Occupations This group of occupations accounts for 1.7 per cent of the seasonally unemployed. Sales clerks and salespersons, which account for 37.6 per cent of the seasonally unemployed in the clerical and sales group, experience the largest increase in registrations from summer to winter, 103.6 per cent. General office clerks, which also account for 37.6 per cent of registrations in this group, experience one of the lowest summer-to-winter increases, 39.6 per cent.

Service Occupations These occupations account for 4 per cent of total seasonally unemployed in New Brunswick. The seasonally unemployed who had worked in service occupations was not as large as the seasonality of employment in the service industry would indicate. This is because many persons who work in summer resorts, restaurants, hotels, amusement centres, etc., are seasonal workers. They work or look for work during the summer months but leave the labour force in early fall. This is particularly true of the large number of students who find employment in the service industries during the summer months.

⁵ The term 'seasonally unemployed' will be used to refer to the seasonal increase in male registrations.

For the group as a whole, registrations increased by 97.1 per cent from summer to winter. Winter registrations of waiters were 100 per cent higher than the summer registrations, kitchen workers 199.1 per cent, cooks and chefs 182.1 per cent, domestic and personal service workers 123 per cent, building service workers and porters by 102 per cent and protective service workers by 64.9 per cent. This latter group accounts for a very large part of registrations in service throughout the year, as can be seen in Table 35 below. Larger relative increases in registrations among other groups make the protective service workers appear less significant during the winter months.

Table 35 - Percentage Distribution of Male Registrations in Service Occupations, New Brunswick, Average 1956-1961

<u>Occupations</u>	<u>Summer 1956-1960</u>	<u>Winter 1957-1961</u>	<u>Seasonally Unemployed</u>
Cooks and Chefs	12.2	17.6	22.9
Waiters	1.3	1.4	1.6
Kitchen Workers	7.6	11.5	15.6
Domestic and Personal Service	5.4	6.1	6.9
Protective Service	63.3	53.0	42.3
Building Service Workers and Porters	10.2	10.4	10.7
Total Service Occupations	100.0	100.0	100.0

Source: Unemployment Insurance Commission, Form 757.

Occupations In Primary Industries Registrations are not a very good indication of the extent of unemployment in agriculture, partly because workers in agriculture are not included under the Unemployment Insurance Act, but also because of their location in relation to the NES offices. Data on agriculture and fishing in Table 36 should be interpreted with caution.

In spite of the downward bias in the contribution of agriculture and fishing, which of course affects the percentage distribution of all other groups, loggers loom very large among the seasonally unemployed in the primary sector. As indicated earlier, the logging pattern has changed considerably. The month of December is still the month of highest employment and the month of April the lowest. The period January to March has become a period of very low employment while the months of July, August and September have become months of relatively high employment. Mechanization has also reduced the total logging work-force and consequently registrations by loggers are high throughout the year. These changes were brought about essentially by the introduction of tractors and trucks to haul logs and pulpwood. This means that snow, which was an advantage when using horses, is now a nuisance. The introduction of mechanical saws also had an effect, as had the

introduction of insecticides which reduce the fly menace in the summer. The low take-home pay and poor working conditions prevailing in the industry in winter, coupled with the introduction of seasonal benefits, have also had an adverse effect on winter logging employment.

Table 36 - Percentage Distribution of Male Registrations in Occupations in Primary Industries, New Brunswick, Average 1956-1961

	Summer 1956-1960	Winter 1957-1961	Seasonally Unemployed
Agriculture, Fishing and Forestry (other than loggers and bushmen)	8.0	8.0	7.9
Loggers and Bushmen	60.0	70.6	74.1
Sawmill and Planing Mill Workers	5.0	3.7	3.2
Cabinet Makers and Joiners	0.5	0.4	0.4
Other Lumbering and Sawmilling Occupations	2.2	1.4	1.2
Unskilled Workers in Lumbering and Lumber Products	16.1	12.7	11.6
Miners	3.0	1.0	0.4
Other Mining Occupations	5.2	2.2	1.2
Total Primary Occupations	100.0	100.0	100.0

Source: Unemployment Insurance Commission, Form 757.

All primary occupations have a seasonal amplitude of 305 per cent, and loggers and bushmen an amplitude of 376 per cent.

Manufacturing Occupations This group includes only skilled and semi-skilled occupations in manufacturing industries. It also excludes occupations which are found in manufacturing but are common to many industries.

As previously mentioned, these occupations account for less than 1 per cent of the seasonally unemployed. There are, however, large differences in the contribution which each of the subgroups make to the pool of the seasonally unemployed. This is partly the result of the relative sizes of these subgroups but partly because they are subject to wider seasonal fluctuations.

Table 37 on page 14 shows the contribution which each occupational subgroup in the manufacturing sector made to the seasonally unemployed of the total group.

The groups most affected by the seasonal factor are stone and clay products and food and tobacco products, with seasonal amplitudes of 438 per cent and 204 per cent respectively. Textile occupations show

practically no seasonal variations while transportation equipment occupations showed a contra-seasonal pattern until 1958 when they made a slight contribution to the pool of the seasonally unemployed.

Table 37 - Percentage Distribution of Male Registrations
in Manufacturing Occupations, New Brunswick,
Average 1956-1961

<u>Occupations</u>	<u>Summer 1956-1960</u>	<u>Winter 1957-1961</u>	<u>Seasonally Unemployed</u>
Food and Tobacco Products	18.9	26.9	34.0
Primary Textiles	26.9	16.4	6.8
Secondary Textiles	2.3	2.6	2.9
Pulp and Paper Products	19.2	18.4	17.6
Printing and Publishing	3.6	2.4	1.4
Chemicals	1.5	1.5	1.5
Rubber Goods	0.2	0.5	0.8
Leather Products	7.9	8.2	8.4
Stone and Clay Products	3.9	9.6	14.7
Transportation Equipment	6.1	2.7	0.0
Other Manufacturing	9.5	10.8	11.9
Total Manufacturing	100.0	100.0	100.0

Source: Unemployment Insurance Commission, Form 757.

Metalworking and Mechanical Occupations This group of occupations accounts for less than 3 per cent of the seasonally unemployed in New Brunswick. Table 38 below shows the contribution of each subgroup.

Table 38 - Percentage of Male Registrations in Metalworking
and Mechanical Occupations, New Brunswick,
Average 1956-1961

<u>Occupations</u>	<u>Summer 1956-1960</u>	<u>Winter 1957-1961</u>	<u>Seasonally Unemployed</u>
Machinists, and Tool and Diemakers	6.3	4.5	2.8
Other Machine Shop Workers	1.7	1.6	1.6
Sheet-Metal Workers	3.4	4.2	4.9
Welders and Flame Cutters	8.4	9.1	9.8
Other Metalworking Occupations	18.0	15.5	13.2
Stationary Engineers and Firemen	15.9	14.1	12.3
Millwrights	3.5	3.8	4.0
Automobile Mechanics	20.4	25.7	30.7
Other Mechanics	15.1	15.6	16.1
Electricians	7.3	5.9	4.6
Total Metalworking and Mechanical	100.0	100.0	100.0

Source: Unemployment Insurance Commission, Form 757.

The automobile mechanics are subject to the largest seasonal amplitude. For the period 1956-1961 it averaged 158 per cent of the summer registrations. Most other groups are not affected severely by seasonal fluctuations in employment.

Construction Occupations Registrations in construction occupations, skilled and unskilled, account for 35 per cent of the total seasonally unemployed in New Brunswick. All individual construction trades are subject to rather large seasonal variations, although some are more severely affected than others. Table 39 below shows the percentage increases from summer to winter for construction occupations.

Table 39 - Percentage Increases in Male Registrations in
Construction Occupations, New Brunswick,
Average 1956-1961

<u>Occupations</u>	<u>Percentage Increase from Summer to Winter</u>
<u>Skilled and Semi-Skilled</u>	
Construction Machinery Operators	336.4
Bricklayers and Tile Setters	449.5
Carpenters	371.2
Cement and Concrete Finishers	310.8
Painters, Construction and Maintenance	250.9
Plasterers	319.2
Plumbers and Steamfitters	95.1
Others	200.4
Total Skilled and Semi-Skilled	327.0

Source: Unemployment Insurance Commission, Form 757.

As can be seen from Table 39, the workers whose type of work is affected most directly by the weather shows the largest increases. Thus, the plasterers and bricklayers show the largest increases while the plumbers and steamfitters show the smallest increases.

Table 40 on page 16 shows the percentage of registrants whose occupations belong to the construction group. Not all the occupations are included, since some occupations common to many industries are difficult to link with one industry. Electricians, sheet-metal workers and foremen are examples. On the basis of information obtained from the 1951 census, the occupations in Table 40 probably account for 80 per cent of the employment in construction occupations.

Table 40 - Percentage Distribution of Male Registrations in Construction Occupations, New Brunswick, Average 1956-1961

<u>Occupations</u>	<u>Summer 1956-1960</u>	<u>Winter 1957-1961</u>	<u>Seasonally Unemployed</u>
Construction Machinery Operators	8.4	8.6	8.6
Bricklayers and Tile Setters	3.1	4.0	4.3
Carpenters	61.7	68.1	70.0
Cement and Concrete Finishers	1.6	1.5	1.5
Painters, Construction and Maintenance	10.9	8.9	8.4
Plasterers	0.9	0.9	0.9
Plumbers and Steamfitters	5.9	2.7	1.7
Other Construction Workers	7.5	5.3	4.6
Total Skilled and Semi-Skilled Construction Occupations	100.0	100.0	100.0

Source: Unemployment Insurance Commission, Form 757.

Carpenters dominate the registrations in construction occupations, accounting for 70 per cent of the seasonally unemployed. This is partly the result of the seasonal factor and partly an index of the size of the carpenters' group in the construction occupation complex. In 1951, the carpenters accounted for 52 per cent of the total construction occupations in New Brunswick.

Transportation, Storage, Communication and Public Utility Occupations

Registrations in the above group of occupations account for nearly 10 per cent of the seasonally unemployed in New Brunswick. Taxi, truck and tractor drivers experience the largest seasonal increase, 288 per cent, and also account for the highest part of the group's contribution to the pool of seasonally unemployed.

Table 41 below shows the distribution of registrations in transportation occupations.

Table 41 - Percentage Distribution of Male Registrations in Transportation, Communication and Public Utilities Occupations, New Brunswick, Average 1956-1961

<u>Occupations</u>	<u>Summer 1956-1960</u>	<u>Winter 1957-1961</u>	<u>Seasonally Unemployed</u>
Routemen	3.2	2.5	2.2
Taxi, Truck and Tractor Drivers	75.4	80.6	83.6
Other	19.4	14.9	12.2
Total Transportation, Communication and Public Utilities	100.0	100.0	100.0

Source: Unemployment Insurance Commission, Form 757.

How Skilled are the Seasonally Unemployed

If registrations are used as a basis of comparison, then the level of skill does not appear to have any significant effect on seasonality. The most important link seems to be the industry, and within the industry; the association appears to be with the weather.

Maybe the question which should be asked is "What kinds of skills do the seasonally unemployed have?" The answer is that they have nearly all the skills which are found in the New Brunswick economy but that the most predominant are those found in the primary and construction industries.

How Old are the Seasonally Unemployed

In New Brunswick the seasonally unemployed are somewhat older than either the summer or winter unemployed. This can be seen in Table 42 below. This difference, which is not very large, is partly the result of the large influx of students into the labour force for short periods during the summer months, and the influx of young persons looking for their first permanent job.

The very young and the very old experience smaller seasonal fluctuations in employment than the middle group. The two principal reasons are that: (1) a large number of young persons looking for work in the summer are back in school in the winter and hence not in the labour force, and (2) many older persons receiving pensions look for work in the summer but leave the labour market in the winter.

Table 42 below shows the age distribution of the registrants.

Table 42 - Summer-to-Winter Increase in Registrations and Percentage Distribution of Registrations, Both Sexes, by Age Group, Average 1956-1961

<u>Age Group</u>	<u>Summer-to-Winter Increase %</u>	<u>Summer 1956-1960</u>	<u>Winter 1957-1961</u>	<u>Seasonally Unemployed</u>
14-19	202.6	14.0	13.4	12.8
20-44	255.6	55.8	58.8	60.0
45-64	237.0	24.4	24.3	24.3
65 and Over	140.5	4.9	3.5	2.9
All Ages	237.5	100.0	100.0	100.0

Source: "Male and Female Unplaced Applicants by Age Group and by Local Office", Unemployment Insurance Commission.

How Long are Persons Unemployed for Seasonal Reasons

It is extremely difficult to separate those unemployed for seasonal reasons and those unemployed for other reasons. It is quite impossible to classify accurately the seasonally unemployed on the basis of duration of their unemployment.

From the Gloucester County study, the duration of the non-work was calculated for all persons who began their non-work period from October 1 to the following March 31. The results of this calculation are shown in Table 43 below. These results do not necessarily apply to the rest of New Brunswick; it is likely, however, that they represent the situation in other highly seasonal labour markets.

Table 43 - Percentage Distribution of Persons Who Began their Non-Work Period Between October and March, 1958-1960, by
Duration of Non-Work Period

	Number of Months Not Working						8 and Over	Total
	<u>1-2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>		
Male	7	7	14	24	21	15	11	100
Female	8	6	15	12	37	12	10	100
Both Sexes	7	7	14	22	23	14	13	100

The groupings around the fourth to seventh months are very noticeable. Nearly three quarters of persons with a record of broken employment had a non-work period lasting from four to seven months. The average duration was 5.3 months. Persons who began their non-work periods during the rest of the year were without employment for an average of 6.7 months. The distribution of the duration was quite different from that of the persons who began their non-work period during the rest of the year. This is shown in Table 44 below.

Table 44 - Percentage Distribution of Persons Who Began their Non-Work Period Between April to September, 1958-1960, by
Duration of Non-Work Period

	Number of Months Not Working						8 and Over	Total
	<u>1-2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>		
Both Sexes	23	4	10	2	3	5	53	100

The most striking feature of the table is the very large percentage of persons who began their non-work period between April 1 and September 30 who experienced very short non-work periods.

Efforts to Stimulate Winter Employment

For many years, the federal Government and all provinces including New Brunswick have carried on an active program to reduce seasonal unemployment in the winter. This program will be discussed under three headings: (1) education and promotion; (2) government activity; and (3) the Municipal Winter Works Incentive Program.

Education and Promotion In the late 1940's a number of NES offices of the Unemployment Insurance Commission organized a 'Find a Job Week' program to ease winter unemployment. As a result of the success achieved by these local campaigns, in January, 1950, the Commission instructed all its offices to promote the establishment of local winter employment committees and to extend the local publicity campaigns. Since 1954, the local campaigns have been incorporated into a National Winter Employment Promotional and Educational Program conducted jointly by the federal Department of Labour and the NES. The purpose of the national program is to inform the public about the seasonal problem and to encourage support for the winter employment campaign from organizations and individual citizens.

The province of New Brunswick has participated in this program very actively, not only through the local employment committees but also directly through the news media. Officers of the New Brunswick Department of Labour have been very active in informing all persons associated with the construction industry on the necessity for increasing winter employment.

The following statistics give some notion of the size of the national campaign. During the winter of 1962-1963, the staffs of local offices of the National Employment Service, members of local winter employment committees and the organizations represented by the Committee members distributed more than 150,000 posters; 138,000 window streamers; 1,500,000 correspondence stickers; 1,780,000 envelope stuffers; 1,055,000 pamphlets; and 280,000 new placemats for restaurants, etc. All of these were provided by the federal Department of Labour working in co-operation with the National Employment Service. Sponsored newspaper advertisements, editorials and new items were estimated to have totalled 258,500 column inches. Over 500 daily and weekly newspapers were involved. Sponsored and public service radio time was estimated at 13,329 minutes, and television time amounted to 3,577 minutes. In addition, locally-sponsored and public service time amounted to 37,782 radio spots, and 11,335 television spots. In total, about 232 radio stations and 81 television stations were involved. There were 461 talks and panel discussions on the winter employment campaign, and local employment committees, which are sponsored by and are advisory to local offices of the National Employment Service, held a total of 784 meetings.

In New Brunswick a total of eleven winter employment committees were active during the 1962-1963 winter employment campaign; 55 committee meetings were held and 41 talks were given on the subject. In addition, material distributed by the local offices of the NES in the campaign amounted to 12,985 posters; 6,717 triangular streamers; 32,330 pamphlets; 28,500 envelope stuffers; 60,000 stickers; and 48,300 placemats. There were a total of 23 newspapers, 11 radio stations, and 4 television stations involved.

Government Activity In 1955, the Government of Canada issued a directive on winter employment to all its departments and agencies. This directive urged all departments and agencies to plan their activities to maximize winter employment whenever possible. An Interdepartmental Committee was established under the Chairmanship of the Deputy Minister of Labour to carry out the intention of the directive. The Committee is made up of representatives from the Department of Labour, the Unemployment Insurance Commission and the principal spending departments in the construction fields: Public Works, Transport, Defence Production, National Defence, Finance, Defence Construction Limited, and Central Mortgage and Housing Corporation.

At approximately the same time the Government of New Brunswick took similar action. In that year an interdepartmental construction project timing Committee was established. Senior provincial officials directly concerned with government construction work were appointed to the Committee. On the basis of the work of this Committee, the Government issued a directive in August of 1955 to all departments and agencies requiring that: "Careful attention be given to planning work for the winter months where the estimated additional cost would not be greater than 10 per cent; that all maintenance and repair work be reserved for the winter period except in case of urgency as certified by the Deputy Minister of Public Works; that each department file with the Secretary of the Committee a list of projects showing how their timing could be arranged to increase winter employment and showing the estimated dollar value of such projects and the number of employees likely to be employed during the winter by reason of timing; and that contract termination dates be arranged so as to provide for the maximum amount of work during the winter."

In the winter of 1957-1958, the Committee reported the timing of some \$8 million worth of work financed either wholly or in part by the provincial Government, providing jobs for an estimated 2,300 persons.

Following the National Winter Employment Conference held in July, 1958, the New Brunswick Department of Labour initiated a survey of winter employment prospects, to determine as accurately as possible: (a) the number of persons registered as unplaced applicants and those currently seeking work in each locality; (b) the number of persons who would be seeking work during the winter and who would not, under existing regulations, be entitled to unemployment insurance benefits; (c) the specific projects which might be undertaken in each locality by federal, provincial or municipal authorities, or jointly by two or all authorities,

with a view to creating useful employment in each locality where and when conditions warranted it. Proposed projects were divided into two categories: (1) those that might be undertaken immediately; and (2) those that might be undertaken during the winter months.

In October of 1958 the Government constituted a special Seasonal Employment Committee consisting of: the Economic Advisor to the Government, the Deputy Ministers of Public Works, Labour and Municipal Affairs, the General Manager of the New Brunswick Electric Power Commission and the Provincial Director of Scaling and Forest Management.

The Order in Council setting up the Committee stated in part as follows: "That solutions (to the seasonal employment problem) will necessarily be both short-term and long-term but in any case, it is essential to have the general employment situation in the province, at all times, under careful scrutiny and study and with sufficient statistical data and other information available upon which to base corrective measures and positive action."

In April, 1959, legislative provision was made for combatting seasonal unemployment through the 'Seasonal Employment Act', the text of which is set out below:

Seasonal Employment Act

Assented to April 11th, 1959.

Her Majesty, by and with the advice and consent of the Legislative Assembly of New Brunswick, enacts as follows:

1. (1) There shall be a committee to be known as the Advisory Committee on Seasonal Employment, which shall act in an advisory capacity to the Minister of Labour. (2) The Committee shall be composed of not fewer than three and not more than seven persons representative of labour, management and government. (3) The members of the Committee shall be appointed by the Lieutenant-Governor in Council and one of them shall be designated as chairman. (4) The members of the Committee representative of labour and management shall be paid such allowances for their services and expenses as the Lieutenant-Governor in Council determines.

2. It is the function of the Committee (a) to keep the employment situation in the province at all times under careful scrutiny and study; (b) to co-ordinate seasonal employment programs carried on by public authorities and private enterprises; (c) to initiate and arrange for studies of seasonal employment trends with a view to seeking long-term and short-term solutions; and (d) to perform such other functions as the Minister of Labour may from time to time prescribe.

3. The Lieutenant-Governor in Council may make such regulations as are considered necessary or advisable with respect to carrying out the intent and purpose of this Act.

Source: New Brunswick Act, 1959, Chapter 12.

The Advisory Committee on Seasonal Employment was established by Order in Council No. 59-403 with the Deputy Minister of Labour as Chairman. It is of interest to note that unlike the previous committees set up to deal specifically with alleviating seasonal unemployment, this one is not a purely interdepartmental committee of the provincial Government. It includes a wider membership of representatives of labour, management and government.

Federal-Municipal Winter Works Incentive Program This program was first put into effect in 1958. Its purpose was to act as an incentive to increase winter employment by assisting municipalities financially to undertake projects of a capital nature normally not undertaken during the winter months.

For the years 1958-1962, the program was effective during the following periods:

December 1, 1958 to May 31, 1959
 December 1, 1959 to May 31, 1960
 October 15, 1960 to May 31, 1961
 October 15, 1961 to May 31, 1962

The projects covered by the program are works carried out by the municipalities in connection with the construction and major improvement of municipal roads, streets, sidewalks, bridges and underpasses; the construction and major improvement of water, sewage and draining facilities and the construction and development of municipal parks and playgrounds and construction and reconstruction of municipal buildings.

In 1961, the program was broadened to include any capital undertaking of a municipality, excluding work on schools and school-grounds, hospital and hospital grounds, subway transportation systems and municipally owned buildings to be used for industrial or business purposes under private auspices.

Financial assistance under the program is given by the federal Government, which provides 50 per cent of the direct payroll costs of work projects accepted under the terms of the program. All provinces have accepted the plan, and all but New Brunswick, Nova Scotia and Newfoundland contribute an additional proportion of 25 per cent of the labour costs for approved projects from provincial treasuries. Quebec offers 40 per cent, and British Columbia contributes 50 per cent of labour costs for all those employed who were on welfare assistance prior to their

employment on winter works. The additional money contributed by the provinces to the program provides additional incentive to the municipalities to participate in it. Quebec, for example, has a very high rate of participation. Although New Brunswick does not make any supplementary payments as noted, it participates very fully by providing all the facilities necessary to enable all municipalities to take full advantage of the provisions of the program.

The bulk of those employed must be unemployed at the time they are hired or persons who would be unemployed in the absence of such special winter works projects. The facilities of the National Employment Service, where available, are used in hiring workers for employment on accepted projects.

During the first three years of the program, any city or town or organized municipality could make application for assistance. The scheme for 1961-1962 was further broadened to include work projects within the scope of the program to be carried out in unorganized settlements, provided the work was sponsored by a community organization and carried out under acceptable community and provincial supervision.

Table 44 on page 24 following gives a summary of the Federal-Municipal Winter Works Incentive Program from its inception until the end of the 1962 program. The table compares New Brunswick's participation with other provinces and with the Canada total. One of the notable features of the table is the increasing use which New Brunswick has made of the program. The number of man-days work provided went up from 52,000 in the first year to 81,000 in the fourth. It is estimated that this was due to the increase in projects relating to roads and sidewalks, water and sewer, and municipal buildings.

The province of New Brunswick also carries out work in the municipalities which are of a nature normally considered a municipal function. Such works may be included in the Municipal Winter Works Incentive Program. Table 45 following shows by years the man-days of work provided in New Brunswick, broken down as between projects carried out by the municipalities themselves, and by the province.

Table 44 - Federal-Municipal Winter Works Incentive Programs 1958-1959; 1959-1960; 1960-1961; 1961-1962

	Year	New		Ontario	Quebec	Canada
		Scotia	Brunswick			
1. Man-days* work provided	1958-59	89,078	52,092	311,830	196,168	1,020,615
	1959-60	73,694	48,049	356,064	213,674	1,273,586
	1960-61	51,754	71,682	690,313	1,342,976	3,199,166
	1961-62	16,377	80,872	705,697	1,694,237	3,710,985
	Total 1958-62	230,903	252,695	2,063,904	3,447,055	9,204,352
2. Federal government expenditure	1958-59	337,247	234,946	1,995,588	1,426,170	6,464,708
	1959-60	296,076	190,918	2,447,483	1,685,739	8,432,673
	1960-61	236,041	333,193	5,368,197	9,121,880	22,669,021
	1961-62	76,418	431,455	5,521,491	11,371,311	26,333,435
	Total 1958-62	945,782	1,190,512	15,332,759	23,605,100	63,899,837
3. Number of men employed	1961-62*	905	5,745	27,171	89,392	196,522

* Figures for previous years not available.

Source: Special Services Branch, Department of Labour.

Table 45 - Man-Days Work Provided Under Federal-Municipal
Winter Works Incentive Program--New Brunswick

	<u>Total</u>	<u>Municipal Projects</u>	<u>Provincial Projects</u>
1958-1959	52,092	26,132	25,960
1959-1960	48,049	1,842	46,207
1960-1961	71,682	20,066	51,616
1961-1962	80,872	49,963	30,909

Source: Special Services Branch, Department of Labour.

These figures show considerable variation. Generally, the amount of work provided by the provincial projects has exceeded that of the municipalities. In 1961-1962, however, the municipal projects provided considerably more work than those undertaken by the province.

The number of municipalities participating in the program has increased over the years, from 12 in 1958-1959 to 30 in 1961-1962, as indicated in Table 46 below.

Table 46 - Number of Municipalities in New Brunswick
Participating in Federal-Municipal Winter
Works Incentive Programs

<u>Year</u>	<u>Number</u>
1958-1959	12
1959-1960	9
1960-1961	29
1961-1962	30

Source: Special Services Branch, Department of Labour.

Note: The total number of Incorporated Municipalities in New Brunswick as of January 1, 1961, was listed as 116 in the 1962 Canada Year Book, Chapter 2, Table 34.

APPENDIX A

<u>Table No.</u>	<u>Title</u>
1	Numerical and Percentage Distribution of the Population of Canada and New Brunswick, by Age and Sex, 1950 and 1960
2	Numerical and Percentage Change in Population, Canada and New Brunswick, by Age and Sex, 1950 and 1960
3	Rural and Urban Distribution of the Population in Canada and New Brunswick, 1951 and 1956
4	Numerical and Percentage Change in the Rural and Urban Distribution of the Population, Canada and New Brunswick, 1951 and 1956
5	Immigration to Canada, 1950 to 1960
6	Estimated Net Migration, Canada and New Brunswick, 1950 to 1960
7	Population by Selected Age Groups for Nova Scotia, New Brunswick, Ontario and Canada, Years 1951 and 1960
8	Numerical and Percentage Distribution of the Population Attending School in New Brunswick, 1951 and 1959/60
9	The Effects of Shifts in the Age Structure of the Population on the Increase in School Attendance in Canada and New Brunswick Between 1950/51 and 1959/60
10	Enrolment in Publicly Controlled Day Schools, Elementary and Secondary, Nova Scotia, New Brunswick, Ontario and Canada, 1950 to 1960
11	Total Enrolment in Public Academic and Vocational Secondary Schools, Nova Scotia, New Brunswick, Ontario and Canada, 1952/53 and 1959/60
12	Per Cent of Population in Various Age Groups Enrolled in Publicly Sponsored Schools, Nova Scotia, New Brunswick, Ontario and Canada
13	Full-time University and College Enrolment in the Regular Session, Undergraduates and Graduates, Canada, Nova Scotia, New Brunswick and Ontario, 1950/51 to 1961/62
14	Summary of Enrolment by Type of School for Nova Scotia, New Brunswick, Ontario, and Canada, 1959/60

APPENDIX A (Concluded)

<u>Table No.</u>	<u>Title</u>
15	Professional and Skilled Workers in the New Brunswick and Canadian Labour Forces, 1951
16	Numerical and Percentage Distribution of Professional and Skilled Workers in the Canadian and New Brunswick Labour Forces, 1951
17	Skill Content of the Canadian and New Brunswick Labour Forces, 1951, by Occupational Group
18	Summary of Full-time Enrolment in Vocational and Technical Courses, Nova Scotia, New Brunswick, Ontario and Canada, by Type of Course, 1952/53 and 1959/60
19	Enrolment In and Graduation From Publicly Sponsored Trade Courses, New Brunswick, 1952/53 to 1959/60
20	Enrolment In and Graduation From Vocational and Technical Courses, New Brunswick, 1952/53 to 1960/61
21	Apprenticeship, New Brunswick, 1952/53 to 1959/60
22	Publicly Sponsored Trade Courses, Enrolment and Graduation, 1959/60
23	Enrolment In and Graduation From Technical, Vocational and Composite High Schools, by Type of Course, 1959/60
24	Enrolment In and Graduation From Publicly Sponsored Post-Secondary Technical Courses, by Type of Course, Nova Scotia and New Brunswick, 1959/60 and 1960/61
25	Indentured Apprentices in Skilled Trades, Nova Scotia, New Brunswick, Ontario and Canada, Years 1950 and 1960
26	The Labour Force by Industry Group, Sex and Years of Schooling, Canada, 1951
27	The Labour Force by Industry Group, Sex and Years of Schooling, New Brunswick, 1951
28	The Labour Force in Selected Industries, by Sex and Years of Schooling, Canada and New Brunswick, 1951

Table 1--Numerical and Percentage Distribution of the Population of Canada and New Brunswick, by Age and Sex, 1950 and 1960

Sex and Age Group	1950			1960			1960		
	(thousands)		Canada	(thousands)		Canada	(per cent)		New Brunswick (per cent)
	Canada	New Brunswick		Canada	New Brunswick		Canada	New Brunswick	
Both Sexes									
0-14	13,688	512	17,814	600	100.0	100.0	100.0	100.0	100.0
15-19	4,062	178	5,976	223	29.7	34.8	33.6	37.2	37.2
20-24	1,074	44	1,376	55	7.8	8.6	7.7	9.2	9.2
25-44	1,107	39	1,218	43	8.1	7.6	6.8	7.2	7.2
45-54	3,942	134	4,818	139	28.8	26.2	27.1	23.1	23.1
55-64	1,382	44	1,826	56	10.1	8.6	10.2	9.3	9.3
65+	1,071	35	1,266	39	7.8	6.8	7.1	6.5	6.5
	1,050	38	1,335	45	7.7	7.4	7.5	7.5	7.5
Males									
0-14	6,942	259	9,027	303	100.0	100.0	100.0	100.0	100.0
15-19	2,069	91	3,052	114	29.8	35.1	33.8	37.6	37.6
20-24	543	22	701	28	7.8	8.5	7.8	9.2	9.2
25-44	550	19	616	21	7.9	7.3	6.8	6.9	6.9
45-54	1,975	68	2,432	69	28.5	26.3	26.9	22.8	22.8
55-64	713	22	937	29	10.3	8.5	10.4	9.6	9.6
65+	557	18	640	20	8.0	7.0	7.1	6.6	6.6
	535	19	650	22	7.7	7.3	7.2	7.3	7.3
Females									
0-14	6,746	253	8,787	297	100.0	100.0	100.0	100.0	100.0
15-19	1,993	87	2,923	109	29.5	34.4	33.3	36.7	36.7
20-24	532	22	675	27	7.9	8.7	7.7	9.1	9.1
25-44	557	20	602	22	8.3	7.9	6.9	7.4	7.4
45-54	1,967	66	2,386	70	29.2	26.1	27.1	23.6	23.6
55-64	669	22	889	27	9.9	8.7	10.1	9.1	9.1
65+	513	17	626	19	7.6	6.7	7.1	6.4	6.4
	515	19	686	23	7.6	7.5	7.8	7.7	7.7

Source: Population Estimates, Reference Paper number 40, Dominion Bureau of Statistics, 1921 to 1952; Estimated Population by Sex and Age Group for Canada and Provinces, Dominion Bureau of Statistics, 1957 to 1960.

Table 2--Numerical and Percentage Change in Population, Canada and New Brunswick, by Age and Sex, 1950 and 1960

Age Group and Sex	Numerical Change		Percentage Change	
	Canada	New Brunswick	Canada	New Brunswick
	(thousands)		(per cent)	
<u>Both Sexes</u>	4,126	88	30.1	17.2
0-14	1,914	45	47.1	25.3
15-19	302	11	28.1	25.0
20-24	111	4	10.0	10.2
25-44	876	5	22.2	3.7
45-54	444	12	32.1	27.3
55-64	195	4	18.2	11.4
65+	285	7	27.1	18.4
<u>Males</u>	2,085	44	30.0	17.0
0-14	983	23	47.5	25.2
15-19	158	6	29.1	27.3
20-24	66	2	12.0	10.5
25-44	457	1	23.1	1.5
45-54	224	7	31.4	31.8
55-64	83	2	14.9	11.1
65+	115	3	21.5	15.8
<u>Females</u>	2,041	44	30.0	17.4
0-14	930	22	46.7	25.3
15-19	143	5	26.9	22.7
20-24	45	2	8.1	10.0
25-44	419	4	21.3	6.1
45-54	220	5	32.9	22.7
55-64	113	2	22.0	11.8
65+	171	4	33.2	21.1

Source: Population Estimates, Reference Paper number 40, Dominion Bureau of Statistics, 1921 to 1952; Estimated Population by Sex and Age Group for Canada and Provinces, Dominion Bureau of Statistics, 1957 to 1960.

Table 3--Rural and Urban Distribution of the Population in
Canada and New Brunswick, 1951 and 1956

Population	1951		1956		1951		1956	
	Canada	New Brunswick (thousands)	Canada	New Brunswick (thousands)	Canada	New Brunswick (per cent)	Canada	New Brunswick (per cent)
<u>Rural</u>	5,381	301	5,366	300	38.4	58.3	33.4	54.0
<u>Farm</u>	2,828	146	2,632	125	20.2	28.3	16.4	22.5
Non-farm	2,553	155	2,734	175	18.2	30.0	17.0	31.5
<u>Urban</u>	8,628	215	10,715	255	61.6	41.7	66.6	46.0
<u>Total</u>	14,009	516	16,081	555	100.0	100.0	100.0	100.0

Source: Census of Canada, 1951, Vol. 1, Table 15; 1956, Vol. 1, Table 12.

Table 4--Numerical and Percentage Change in the Rural
and Urban Distribution of the Population,
Canada and New Brunswick, 1951 and 1956

Population	Numerical Change		Percentage Change	
	Canada	New Brunswick	Canada	New Brunswick
	(thousands)		(per cent)	
<u>Rural</u>	- 15	- 1	- 0.3	- 0.3
Farm	- 196	-21	- 6.9	-14.4
Non-farm	+ 181	+20	+ 7.1	+12.9
<u>Urban</u>	+2,087	+40	+24.2	+18.6
<u>Total</u>	+2,072	+39	+14.8	+ 7.6

Source: Census of Canada, 1951, Vol. 1, Table 15; 1956, Vol. 1, Table 12.

Table 5--Immigration to Canada, 1950 to 1960

Year	Destination of Immigrants		Per Cent of Population	
	All Provinces	New Brunswick	All Provinces	New Brunswick
	(number)		(per cent)	
1950	73,912	663	0.54	0.13
1951	194,391	1,423	1.39	0.28
1952	164,498	1,020	1.14	0.19
1953	168,868	1,080	1.14	0.20
1954	154,227	1,011	1.01	0.19
1955	109,946	659	0.70	0.12
1956	164,857	852	1.03	0.15
1957	282,164	1,674	1.70	0.30
1958	124,851	1,031	0.73	0.18
1959	106,928	640	0.61	0.11
1960	104,111	634	0.58	0.10

Source: Department of Citizenship and Immigration, Annual Report 1950 to 1960.

Table 6--Estimated Net Migration, Canada and
New Brunswick, 1950 to 1960

Year	Net Migration		Per Cent of Population	
	Canada	New Brunswick	Canada	New Brunswick
	(number)		(per cent)	
1950	+ 23,008	-7,797	+0.17	-1.52
1951	+ 49,211	-7,498	+0.35	-1.45
1952	+194,731	-1,202	+1.34	-0.23
1953	+108,826	-5,044	+0.73	-0.95
1954	+151,907	-4,821	+0.99	-0.89
1955	+ 99,657	-5,363	+0.63	-0.98
1956	+ 68,539	-4,174	+0.43	-0.75
1957	+189,222	-1,915	+1.14	-0.34
1958	+126,486	- 425	+0.74	-0.07
1959	+ 59,083	+1,114	+0.34	+0.19
1960	+ 32,638	-1,739	+0.18	-0.29

Method: The net migration figures are calculated by adding the natural increase to the population of one year and subtracting the result from the population of the following year.

Sources: Canada Year Book: 1957/58, pages 196-198, Table 1; 1961, page 165, Table 16, pages 204-205, Table 1; DBS, Estimated Population of Canada and Provinces, 1958 to 1960, page 2; Vital Statistics, 1959, pages 93, 107, Tables 8, 20.

Table 7--Population by Selected Age Groups for Nova Scotia, New Brunswick,
Ontario and Canada, Years 1951 and 1960

Age Group	Nova Scotia		New Brunswick		Ontario		Canada	
	1951	1960	1951	1960	1951	1960	1951	1960
	(thousands)							
5-9.....	68.8	84.1	59.5	75.8	399.3	653.0	1,397.8	2,016.6
10-14.....	58.1	75.5	49.5	68.0	325.3	544.8	1,130.8	1,734.4
15-19.....	51.5	62.2	42.9	55.2	315.7	420.2	1,058.0	1,375.7
20-24.....	46.3	50.7	36.6	42.7	352.4	396.5	1,088.6	1,217.5
5-24.....	224.7	272.5	188.5	241.7	1,392.7	2,014.5	4,675.2	6,344.2

Sources: Statistical Review of Canadian Education, Census 1951, DBS, Reference
Paper number 84, Table 6.

Estimated Population by Sex and Age Group for Canada and the Provinces,
DBS, 1960.

Table 8--Numerical and Percentage Distribution of the Population
Attending School in New Brunswick, 1951 and 1959/60

Age Group	1951			1959/60		
	Total Population	Attending School	Rate	Total Population	Attending School	Rate
	(thousands)		(per cent)	(thousands)		(per cent)
5-9.....	59.5	37.7	63.4	75.8	(a)	-
10-14.....	49.5	46.5	94.0	68.0	(a)	-
15-19.....	42.9	17.4	40.6	55.2	(a)	-
20-24.....	36.6	1.4	3.8	42.7	(a)	-
5-24.....	188.5	103.0	54.6	241.7	157.8	65.3

(a) Not available.

Sources: Statistical Review of Canadian Education, Census, 1951, DBS, Reference Paper number 84, Table 6.

Estimated Population by Sex and Age Group, Canada and Provinces, DBS, 1960.

See Table 14 for 1959/60 school attendance figures.

Table 9--The Effects of Shifts in the Age Structure of the Population on the Increase in School Attendance in Canada and New Brunswick Between 1950/51 and 1959/60

	1 Population 5-24 Years of Age 1951	2 Actual School Attendance 5-24 1950/51 No. & Rate	3 Population 5-24 Years of Age 1960	4 Actual School Attendance 1959/60 No. & Rate	5 Theoretical School Attendance 1959/60 at 1951 Rate	6 Increase in School Attendance Between 1950/51 and 1959/60		
						Total	Resulting from Population Changes	Resulting from Changes in the Rate of School Attendance
Canada (thousands) (per cent).....	4,675.2 100.0	2,441.4 52.2	6,344.2 100.0	4,204.9 66.3	3,540.0 55.8	1,763.5 100.0	1098.6 62.2	664.9 37.8
New Brunswick (thousands) (per cent)...	188.5 100.0	103.0 54.6	241.7 100.0	157.8 65.3	136.0 56.3	54.8 100.0	33.0 60.2	21.8 39.8

Note: The theoretical school attendance for 1959/60 (column 5) is arrived at by applying the 1950/51 actual attendance rates for each age group to the 1960 actual population for the same age groups. (For details see Table 7.)

Sources: Statistical Review of Canadian Education, Census, 1951, DES, Reference Paper number 84, Table 6.
 Estimated Population by Sex and Age Group, Canada and Provinces, DES, 1960.
 Preliminary Statistics of Education, DES, 1961/62, Table 1. See also Table 14 for 1959/60 for school attendance figures in New Brunswick and Canada.

Table 10--Enrolment in Publicly Controlled Day Schools
Elementary and Secondary, Nova Scotia,
New Brunswick, Ontario and Canada,
1950 to 1960

School Year Ending June	Nova Scotia	New Brunswick	Ontario	Canada
1950.....	130,398	104,071	745,276	2,377,529
1951.....	134,483	105,690	768,202	2,446,742
1952.....	138,033	106,503	814,096	2,567,849
1953.....	141,454	111,454	877,874	2,708,846
1954.....	146,388	117,381	933,104	2,864,102
1955.....	151,652	122,359	979,609	3,055,569
1956.....	156,847	127,134	1,037,274	3,211,529
1957.....	160,299	131,054	1,097,501	3,347,675
1958.....	164,255	133,515	1,174,642	3,495,239
1959.....	171,386	141,786	1,249,673	3,631,587
1960.....	177,092	147,836	1,319,225	3,813,711

Sources: Survey of Elementary and Secondary Education, DBS,
1956 to 1958, Table 17.

Preliminary Statistics for Education, 1960/61,
1961/62, Table 1.

Table 11--Total Enrolment in Public Academic and Vocational
Secondary Schools--Nova Scotia, New Brunswick
Ontario and Canada, 1952/53 and 1959/60

	1952/53	1959/60
<u>Nova Scotia</u>		
Total secondary school enrolment.....	19,457 ¹	28,254 ³
Total vocational school enrolment.....	276 ²	817 ⁴
Total <u>Academic</u> secondary school enrolment..	19,181	27,437
<u>New Brunswick</u>		
Total secondary school enrolment.....	13,538 ¹	23,567 ³
Total vocational school enrolment.....	565 ²	4,734 ⁴
Total <u>Academic</u> secondary school enrolment..	12,973	18,833
<u>Ontario</u>		
Total secondary school enrolment.....	151,827 ¹	252,111 ³
Total vocational school enrolment.....	N/A ²	54,019 ⁴
Total <u>Academic</u> secondary school enrolment..	-	198,092
<u>Canada</u>		
Total secondary school enrolment.....	361,878 ¹	715,624 ³
Total vocational school enrolment.....	20,302 ²	104,676 ⁴
Total <u>Academic</u> secondary school enrolment..	341,576	610,948

Note: Figures for total Academic secondary school enrolment were arrived at by subtracting the enrolment figures for vocational schools from the enrolment figures for all secondary schools.

Source: ¹ Preliminary Statistics of Education, DBS, 1952/53, Table 1.
² Vocational Training Program in Canada No. 5A, Department of Labour, Table 10. Canada total is estimated in Table 2.
³ Survey of Elementary and Secondary Education, DBS, 1959/60.
⁴ Survey of Vocational Education and Training, DBS, 1959/60, Table 12.

Table 12--Per Cent of Population in Various Age Groups Enrolled in Publicly Sponsored Schools, Nova Scotia, New Brunswick, Ontario and Canada

Type of School	Year	Age Group	Nova Scotia	New Brunswick	Ontario	Canada
			(per cent)			
1. Elementary and secondary.....	1951 1960	5-24 5-24	59.8 65.0	56.1 61.2	55.2 65.5	52.3 60.1
2. Secondary academic.....	1952/53 1959/60	10-19 10-19	17.5 19.9	14.0 15.3	N/A 20.5	15.6 19.6
3. Secondary vocational.....	1952/53 1959/60	10-19 10-19	0.2 0.6	0.6 3.8	N/A 5.6	0.9 0.9
4. Total secondary.....	1952/53 1959/60	10-19 10-19	17.8 20.5	14.6 19.1	23.7 26.1	16.5 23.0
5. University (undergraduate, diploma and post-graduate).	1951/52 1960/61	15-24 15-24	3.6 5.1	2.5 4.2	3.0 3.8	2.8 4.3

Sources: See Table 7 for population by age groups.

See Tables 10, 11 and 13 for enrolment figures in each category.

Table 13--Full-time University and College Enrolment in the
Regular Session, Undergraduates and Graduates,
Canada, Nova Scotia, New Brunswick and
Ontario, 1950/51 to 1961/62

Year	Nova Scotia	New Brunswick	Ontario	Canada
1950/51	3,751	734 ^a	22,181	63,577 ^a
1951/52	3,515	1,963	19,749	60,381
1952/53	N/A	N/A	18,840	59,802
1953/54	3,741	2,040	18,917	61,018
1954/55	4,021	2,272	20,470	65,365
1955/56	4,259	2,540	21,489	69,404
1956/57	4,534	2,791	22,869	75,993
1957/58	4,770	3,123	25,000	84,498
1958/59	4,976	3,367	26,964	92,560
1959/60	5,297	3,655	28,540	100,162
1960/61	5,811	4,063	31,288	112,429
1961/62	6,409	4,533	35,871	128,894

^a Exclusive of the University of New Brunswick.

Source: Fall Enrolment in universities and colleges,
1950 to 1961, DBS.

Table 14--Summary of Enrolment by Type of School for Nova Scotia,
New Brunswick, Ontario, Canada, 1959/60

Type of School or Course	Nova Scotia	New Brunswick	Ontario	Canada
<u>Elementary and Secondary</u>				
Public and separate schools.....	177,092	147,836	1,319,225	3,813,711 ^a
Private schools.....	6,268 ^b	2,618	25,316	165,295
Indian schools ⁽¹⁾	769	498	7,145	31,465
Schools for the blind and deaf...	165	117	655	2,552 ^d
Total.....	184,294	151,069	1,352,341	4,013,023
<u>Vocational Education</u>				
Post-secondary ⁽²⁾	19	56	2,714	8,333
Vocational included under "public elementary and secondary"				
Public trade courses (pre-employment).....	1,318	982	1,636	23,981
Public trade courses (apprentices) ^c	487	907	2,223	12,882
Private trade schools.....	139	-	2,349	11,580
Private business schools.....	568 ^e	586	5,119	18,491
<u>Universities and Colleges</u> ⁽³⁾	5,297	3,655	28,540	100,162
<u>Teacher Training</u>				
Teachers colleges.....	491	579	5,951	16,428
Total.....	192,613	157,834	1,400,873	4,204,880

^a Includes enrolment in Department of National Defence schools overseas.

^b Enrolment for the only private school in Newfoundland included with Nova Scotia.

^c Enrolment by province of residence.

^d Includes pupils residing outside of Canada.

^e Includes Prince Edward Island.

Sources: Preliminary Statistics of Education, DBS, 1961-62, Table 1.

(1) Survey of Elementary and Secondary Education, DBS, 1959/60.

(2) Survey of Vocational Education and Training, DBS, 1959-60;
Canada "post-secondary" total obtained from "Canadian Technical Institutes", 1959.

(3) Fall Enrolment in Universities and Colleges, DBS, 1959.

Table 15--Professional and Skilled Workers in the New Brunswick and Canadian Labour Forces, 1951

Occupation Group and Class	Canada		New Brunswick	
	(number)	(per cent)	(number)	(per cent)
<u>Professional</u>				
Accountants and auditors.....	34,151	11.3	588	6.7
Actuaries.....	258	0.1	-	-
Agricultural professionals, n.e.c.....	2,698	0.9	105	1.2
Architects.....	1,740	0.6	22	0.3
Artists and art teachers.....	4,896	1.6	41	0.5
Authors, editors, journalists.....	7,217	2.4	130	1.5
Chemists and metallurgists.....	8,574	2.8	149	1.7
Clergymen and priests.....	16,097	5.3	669	7.6
Dentists.....	4,608	1.5	111	1.3
Dieticians.....	1,101	0.4	30	0.3
Engineers, civil (incl. surveyors).....	12,168	4.0	389	4.4
Engineers, electrical.....	6,349	2.1	82	0.9
Engineers, mechanical.....	8,328	2.8	61	0.7
Engineers, mining and chemical.....	4,616	1.5	33	0.4
Judges and magistrates.....	597	0.2	31	0.4
Lawyers and notaries.....	9,038	3.0	226	2.6
Librarians.....	2,061	0.7	28	0.3
Musicians and music teachers.....	8,033	2.7	157	1.8
Nurses, graduate.....	35,138	11.6	1,160	13.3
Osteopaths and chiropractors.....	832	0.3	20	0.2
Physicians and surgeons.....	14,325	4.7	357	4.1
Professors and college principals.....	5,422	1.8	177	2.0
Social welfare workers, n.e.s.....	3,995	1.3	54	0.6
Statisticians.....	742	0.2	10	0.1
Teachers (incl. instructors).....	105,118	34.7	4,054	46.3
Veterinarians.....	1,205	0.4	31	0.4
Other ^a	3,250	1.1	36	0.4
Total.....	302,557	100.0	8,749	100.0
<u>Skilled Occupations</u>				
Mining and quarrying.....	39,894	100.0	672	100.0
Foremen.....	4,725	11.9	27	4.0
Miners.....	29,817	74.7	518	77.1
Quarriers.....	5,352	13.4	127	18.9
Manufacturing and mechanical.....	557,377	100.0	9,138	100.0
Foremen.....	50,849	9.1	1,001	11.1
Furriers.....	5,774	1.0	30	0.3
Shoemakers and repairers, n.i.f.....	6,254	1.1	194	2.1
Inspectors and menders (textiles)....	5,212	0.9	66	0.7
Loom fixers and card grinders.....	1,156	0.2	102	1.1
Weavers (textiles).....	9,002	1.6	197	2.2
Cutters.....	4,799	0.9	13	0.1

Table 15--Continued

Occupation Group and Class	Canada		New Brunswick	
	(number)	(per cent)	(number)	(per cent)
Manufacturing and mechanical (cont.)				
Milliners.....	1,481	0.3	8	0.1
Tailors and tailoresses.....	9,169	1.6	38	0.4
Dressmakers and seamstresses, n.i.f..	14,237	2.6	396	4.3
Inspectors, graders, scalers (wood products).....	6,293	1.1	327	3.6
Cabinet and furniture makers.....	6,985	1.3	105	1.1
Upholsterers.....	5,117	0.9	58	0.6
Paper makers.....	6,497	1.2	284	3.1
Engravers and lithographers ^b	3,523	0.6	14	0.2
*Other occupations in printing and publishing.....	26,185	4.7	366	4.0
Inspectors and gaugers--metal.....	12,860	2.3	75	0.8
Blacksmiths, hammermen, forgers.....	9,587	1.7	374	4.1
Boilermakers and platers.....	4,579	0.8	248	2.7
Furnacemen, moulders, coremakers.....	19,671	3.5	246	2.7
Electroplaters.....	1,728	0.3	10	0.1
Heat treaters and annealers.....	762	0.1	-	-
Jewellers and watch makers.....	4,299	0.8	83	0.9
Machinists--metal.....	31,277	5.6	557	6.1
Mechanics and repairmen, n.e.s.....	135,531	24.3	3,584	39.2
Mechanics--airplane.....	3,925	0.7	21	0.2
Mechanics--motor vehicle.....	64,328	11.5	2,033	22.3
Mechanics--railroad or car shop....	9,306	1.7	578	6.3
Mechanics, n.e.s.....	53,169	9.5	845	9.2
Radio repairmen.....	4,803	0.9	107	1.2
Millwrights.....	8,055	1.5	298	3.3
Patternmakers.....	2,311	0.4	37	0.4
Sheet metal workers and tinsmiths....	13,750	2.5	225	2.5
Toolmakers, diemakers, setters.....	9,443	1.7	18	0.2
Stone cutters and dressers.....	1,896	0.4	69	0.8
Sulphite cookers and digesters.....	698	0.1	49	0.5
Dental mechanics.....	1,510	0.3	39	0.4
Opticians; lens grinders and polishers.....	1,356	0.3	27	0.3
Electric light and power and stationary engineers.....	51,077	100.0	1,428	100.0
Construction machinery operators, n.e.s.....	8,227	16.1	359	25.1
Hoistmen, crane men, derrickmen.....	13,376	26.2	324	22.7
Power station operators.....	3,888	7.6	115	8.1
Stationary engineers.....	25,586	50.1	630	44.1

Table 15--Continued

Occupation Group and Class	Canada		New Brunswick	
	(number)	(per cent)	(number)	(per cent)
Construction.....	195,722	100.0	5,343	100.0
Foremen and Inspectors.....	13,186	6.7	486	9.1
Brick and stone masons.....	15,845	8.1	415	7.8
Carpenters ^c	64,522	33.0	2,307	43.2
Cement and concrete finishers.....	2,946	1.5	47	0.9
Electricians and wiremen.....	35,005	17.9	675	12.6
Painters, decorators, glaziers ^c	23,579	12.1	613	11.5
Plasterers and lathers.....	9,270	4.7	66	1.2
Plumbers and pipefitters.....	29,531	15.1	664	12.4
Structural iron workers.....	1,838	0.9	70	1.3
Transportation.....	46,183	100.0	2,017	100.9
Foremen and inspectors.....	14,221	30.8	711	35.2
Air pilots and navigators (civil)....	1,141	2.5	46	2.3
Captains, mates, pilots.....	4,601	10.0	100	5.0
Conductors, steam railways.....	6,364	13.8	265	13.1
Engineering officers--ship.....	3,236	7.0	87	4.3
Locomotive engineers.....	9,366	20.2	458	22.7
Locomotive firemen.....	7,254	15.7	352	17.4
Communication.....	30,187	100.0	1,103	100.0
Foremen and inspectors.....	1,564	5.2	34	3.1
Linemen and servicemen.....	19,459	64.4	649	58.8
Radio operators.....	2,539	8.4	122	11.1
Telegraph operators.....	6,625	22.0	298	27.0
Service.....	61,535	100.0	2,068	100.0
Motion picture projectionists.....	1,944	3.1	56	2.7
Barbers, hairdressers and manicurists ^d	24,415	39.7	831	40.2
Cooks ^d	35,176	57.2	1,181	57.1
Technicians.....	27,325	100.0	484	100.0
Draughtsmen and designers ^d	13,012	47.6	121	25.0
Laboratory technicians ^d	14,313	52.4	363	75.0

Table 15--Concluded

Note: Data for Canada taken from a table published in "Skilled and Professional Manpower in Canada", a report prepared by the Department of Labour for the Royal Commission on Canada's Economic Prospects. Data for New Brunswick were taken from the 1951 Census.

- ^a "Estimates. The figures shown include mainly social scientists other than actuaries, geologists and other scientists n.e.s., optometrists and fish culturists. In the 1951 Census these occupations were classified in 'Other professional occupations' together with a number of occupations which do not come within the definition of professional occupations used in this report", Skilled and Professional Manpower in Canada, 1945 to 1965, a study prepared by the Department of Labour for the Royal Commission on Canada's Economic Prospects.
- ^b Includes photoengravers and engravers--metal products.
- ^c Census figures reduced because of a large semi-skilled component.
- ^d These occupations were not included in the report of the Royal Commission on Canada's Economic Prospects.
- ^{*} Includes bookbinders; compositors and typesetters; pressmen and plate printers; and other printing and publishing occupations.

Table 16--Numerical and Percentage Distribution of Professional
and Skilled Workers in the Canadian and
New Brunswick Labour Forces, 1951

	Canada		New Brunswick	
	(number)	(per cent)	(number)	(per cent)
(A) Professional.....	302,557	5.7	8,749	5.2
(B) Technicians.....	27,325	0.5	484	0.3
(C) Skilled.....	981,975	18.6	21,771	12.9
Mining.....	39,894	0.7	672	0.4
Manufacturing.....	557,377	10.5	9,138	5.4
Electric light and power and stationary engineers...	51,077	1.0	1,428	0.8
Construction.....	195,722	3.7	5,343	3.2
Transportation.....	46,183	0.9	2,019	1.3
Communication.....	30,187	0.6	1,103	0.6
Service.....	61,535	1.2	2,068	1.2
Total (A), (B) and (C).....	1,311,857	24.8	31,004	18.4
Other occupations.....	3,974,296	75.2	138,034	81.6
Total.....	5,286,153	100.0	169,038	100.0

Source: Table 8 for occupational data; Census of Canada, 1951, Vol. IV for total labour force data.

Table 17--Skill Content of the Canadian and New Brunswick Labour Forces,
1951, by Occupational Group

Occupational Group	Canada			New Brunswick		
	Total	Skilled	Per Cent	Total	Skilled	Per Cent
Mining.....	65,291	39,894	61.1	930	672	72.3
Manufacturing and mechanical.....	841,368	557,377	66.2	17,446	9,138	52.4
Electric light and power production and stationary engineers.....	61,618	51,077	82.9	1,751	1,428	81.6
Construction.....	299,611	195,722	65.3	8,790	5,343	60.8
Transportation.....	342,189	46,183	13.5	14,211	2,019	14.2
Communication.....	71,118	30,187	42.4	2,225	1,103	49.6
Service.....	516,782	61,535	11.9	16,236	2,068	12.7
Total.....	2,197,977	981,975	44.7	61,589	21,771	35.3

Source: Table 16 for skilled occupations; data on total labour force in each occupational group were obtained from Census of Canada 1951, Vol. IV.

Table 18--Summary of Full-time Enrolment in Vocational and Technical Courses, Nova Scotia, New Brunswick, Ontario and Canada, by Type of Course, 1952/53 and 1959/60

Programs	Nova Scotia		New Brunswick		Ontario		Canada	
	1952/53	1959/60	1952/53	1959/60	1952/53	1959/60	1952/53	1959/60
<u>Publicly Sponsored</u>								
A Trade courses.....	131 ^a	1,318 ^a	289 ^a	982 ^a	-	1,636 ^a	5,781 ^a	23,981 ^a
B Vocational high school courses...	276	817	2,768	4,734	N/A	54,019	20,302	104,676
C Post-secondary technical courses.	10	19	-	56	903	2,714	3,010	8,333
D Apprenticeship courses ^b	52 ^b	246 ^b	-	98 ^b	1,458 ^b	2,223 ^b	3,940 ^b	9,902 ^b
Total.....	469	2,400	3,057	5,870	2,361	60,592	33,033	146,892
<u>Privately Sponsored^c</u>								
Trade school courses.....	N/A	139	N/A	-	N/A	2,349	N/A	11,580
Business school courses.....	401	500 ^d	548	586	4,697	5,119	14,269	18,491
Total.....	401	639	548	586	4,697	7,468	14,269	30,071
TOTAL.....	870	3,039	3,605	6,456	7,058	68,060	47,302	176,693

Notes: The figures for the two dates are not strictly comparable, as noted in the following.

^a Data for 1959/60 include all courses for training of the unemployed, of the disabled, in primary industries and homemaking, as well as courses taken by the ordinary student who did not benefit directly from any of the federal-provincial programs of shared cost. Data for 1952/53 include courses given only for the ordinary student. The figures are not therefore strictly comparable. See also Table 19.

^b These figures only represent those apprentices enrolled in full-time courses. Those enrolled in part-time courses represent an important segment of apprentices undergoing training. In 1959/60, the enrolments in part-time courses by indentured apprentices amounted to 237 persons in Nova Scotia, 785 in New Brunswick, and 8,985 in Canada.

^c An unknown number of residents are enrolled in correspondence courses in private schools.

^d Unpublished data for DBS.

Sources: Vocational Training in Canada, No. 5A, Department of Labour, Tables 2, 9, 10, 11, 12 (for 1952/53) data on publicly sponsored courses). Canada total for "B" is estimated.

New Brunswick Department of Education, DBS, 1952/53, Table 9 (for data on publicly sponsored courses).

Preliminary Statistics of Education and Training, DBS, 1959/60, table on p. 8 and Tables 12, 23, and 38 (for all 1959/60 data). "Canadian Technical Institutes" 1959, for "post-secondary" enrolment for Canada for 1959/60.

Table 19--Enrolment In and Graduation From Publicly Sponsored Trade Courses,
New Brunswick (1952/53 to 1959/60)

	1952/53	1953/54	1954/55	1955/56	1956/57	1957/58	1958/59	1959/60
A. Publicly Sponsored Trade Courses:								
1. Schedule "M".....	N/A	N/A	N/A	N/A	N/A	N/A	N/A	259
E.....	N/A	N/A	N/A	N/A	N/A	N/A	N/A	165
G.....	N/A	N/A	N/A	N/A	N/A	N/A	N/A	209
2. Schedule "P".....	N/A	N/A	N/A	N/A	N/A	N/A	N/A	199
E.....	N/A	N/A	N/A	N/A	N/A	N/A	N/A	105
G.....	N/A	N/A	N/A	N/A	N/A	N/A	N/A	58
3. Schedule "R".....	N/A	N/A	N/A	N/A	N/A	N/A	N/A	409
E.....	N/A	N/A	N/A	N/A	N/A	N/A	N/A	386
G.....	203	190	154	152	130	N/A	N/A	
4. Schedule "A".....	166	155	134	141	110	N/A	N/A	
E.....	289	190	154	152	130	N/A	N/A	982
G.....	166	155	134	141	110	N/A	N/A	808
Total.....								

Notes: "E": Enrolled as of September and added during the year.

"G": Courses completed during the year.

A "Publicly Sponsored Trade Courses": refer to courses designed to prepare youths and adults who have left the regular school system for entry into employment, or to upgrade those already in jobs. The skills of the trade are emphasized as well as trade theory, mathematics and science as required to work effectively in the trade. Schedule "A" is comparable to the earlier classification of full-time employment and pre-apprenticeship.

(a) Schedule "M" refers to the training of unemployed persons.

(b) Schedule "P" refers to training in primary industries and homemaking.

(c) Schedule "R" refers to training of disabled persons.

(d) Schedule "A" refers to courses taken by the ordinary student who did not benefit directly from any of the federal-provincial programs of shared cost. As a rule, the enrolment figures refer to full-time day enrolment, and the length of the courses may range from a few days to two years.

Sources: Vocational Training in Canada, No. 5A, Department of Labour, Table 11 (for Schedule "A" data, 1952/53 to 1956/57).

Survey of Vocational Education and Training", DBS, 1959/60, Table 4 (for 1959/60 data).

New Brunswick Department of Education for 1952/53 enrolment figure.

Table 20--Enrolment In and Graduation From Vocational and Technical Courses,
New Brunswick (1952/53 to 1960/61)

Programs	1952/53	1953/54	1954/55	1955/56	1956/57	1957/58	1958/59	1959/60	1960/61
B. Technical, vocational and composite high schools.. G	2,768 115	710 158	770 161	822 194	867 201	N/A N/A	N/A N/A	4,734 1,130	4,706 1,094
C. Publicly sponsored post-secondary courses..... G	- -	3 2	14 14	20 19	24 21	N/A N/A	N/A N/A	56 38	61 23

Notes: E: Enrolment.
G: Graduation.

- B. Technical, vocational and composite high schools: courses designed to prepare students for employment while they complete their general education.
- C. Post-secondary courses: offers "technicians" training. Courses have a content of mathematics and science beyond that taught up to high school graduation or junior matriculation, but not including university courses.

Sources: Vocational Training in Canada, No. 5A, Department of Labour, Tables 10, 9.
Survey of Vocational Education and Training, 1959/60, DBS, Tables 12, 13.
Preliminary Statistics of Education, 1960/61, 1961/62, Tables 16, 15.
New Brunswick Department of Education for 1952/53 enrolment figure.

Table 21--Apprenticeship--New Brunswick (1952/53 to 1959/60)

	1952/53	1953/54	1954/55	1955/56	1956/57	1957/58	1958/59	1959/60
D. Apprenticeship:^a								
Full-time enrolment ^b E				28	34	N/A	N/A	98
Part-time enrolment..... E						N/A	N/A	785
Correspondence..... E						N/A	N/A	24
Total..... E						N/A	N/A	907
Indentured apprentices^b as of Sept. 30..... I	383	632	665	667	605	818	930	959
Apprenticeship completed during 12-mos. period preceding Sept. 30..... C	47	73	14	73	108	64	157	208

^a "Apprenticeship": courses are given either on a full-time or a part-time basis to indentured apprentices. Full-time courses require full-time daily attendance for periods ranging from four to twelve weeks a year. Part-time courses are taken on a part-time basis, usually in the evening.

^b There are no graduates as such from apprenticeship classes. A count of the numbers of indentured apprentices and the numbers completing their apprenticeship provides a more useful record of the numbers being trained under the apprenticeship system.

Sources: Vocational Training in Canada, No. 5A, Department of Labour, Table 12.
Survey of Vocational Education and Training, 1959, DBS, Tables 23, 27.

Table 22--Publicly-Sponsored Trade Courses, Enrolment and Graduation, 1959/60

	Nova Scotia		New Brunswick		Ontario		Canada	
	E	G	E	G	E	G	E	G
Agriculture.....	58	57	130	128	468	201	4,432	3,061
Forestry.....	-	-	288	273	434	226	-	-
Fishery.....	216	183	19	19	23	23	-	-
Commercial.....	221	128	31	27	282	119	1,706	891
Home economics.....	-	-	60	52	1	-	-	-
Practical nursing.....	3	2	76	42	-	-	-	-
Cooking.....	61	27	-	-	1	-	275	117
Sewing.....	4	1	177	118	3	2	566	326
Barbering.....	22	16	14	9	19	11	199	131
Beauty culture and hairdressing.....	3	1	4	3	24	12	587	369
Shoe repair.....	2	1	5	4	1	-	-	-
Watch repair.....	8	2	8	2	15	2	-	-
Bricklaying.....	-	-	10	8	-	-	1,125	473
Carpentry and cabinet making.....	1	-	25	20	2	-	-	-
Plumbing.....	-	-	12	11	-	-	-	-
Electricity and electronics.....	2	2	14	14	34	10	1,620	633
Refrigeration and appliance repair.....	3	1	-	-	1	1	-	-
Automotive.....	33	17	46	39	13	12	2,398	102
Machine shop.....	43	21	7	7	-	-	1,015	320
Sheet metal.....	36	26	-	-	-	-	-	-
Welding.....	119	77	19	18	42	39	2,978	2,563
Stationary engineering.....	-	-	-	-	4	2	-	-
Draughting.....	3	1	-	-	-	-	278	162
Marine engineering.....	187	22	-	-	-	-	-	-
Engineering (marine and stationary).....	-	-	-	-	-	-	1,005	445
Navigation.....	285	203	-	-	-	-	658	516
Telecommunication.....	-	-	-	-	-	-	152	79
Miscellaneous.....	8	4	37	14	269	159	719	358
Total.....	1,318	792	982	808	1,636	819	23,981	13,896

Source: Survey of Vocational Education and Training, DBS, 1959/60, Tables 1, 4, 5, 7, pp. 18, 22, 23, 25.

Table 23--Enrolment In and Graduation From Technical, Vocational and Composite High Schools, by Type of Course, 1959/60

	Nova Scotia		New Brunswick		Ontario		Canada	
	E	G	E	G	E	G	E	G
Agriculture.....	-	-	60	20	-	-	413	N/A
Applied Arts.....	-	-	20	8	638	73	700	88
Commercial.....	486	N/A	2,620	680	31,135	4,118	64,817	N/A
Home Economics.....	3	N/A	499	120	412	55	8,980 ^b	N/A
Service Occupations.....	15	N/A	-	-	-	-	38	N/A
Industrial.....	313	N/A	1,535 ^a	302 ^a	21,834 ^a	1,785	29,728 ^{a,b}	N/A
Automotive.....	59	N/A	N/A	N/A	N/A	235	N/A	N/A
Building construction.....	117	N/A	N/A	N/A	N/A	92	N/A	N/A
Draughting.....	28	N/A	N/A	N/A	N/A	429	N/A	N/A
Electrical and Electronics.....	71	N/A	N/A	N/A	N/A	501	N/A	N/A
Mechanical and metal working.....	38	N/A	N/A	N/A	N/A	373	N/A	N/A
Printing.....	-	-	N/A	N/A	N/A	63	N/A	N/A
Miscellaneous.....	-	-	25	15	N/A	92	N/A	N/A
Total.....	817	N/A	4,734	1,130	54,019	6,031	104,676 ^b	N/A
Per Cent of 10-19 year age group enrolled in vocational high schools.	0.6%		3.8%		5.6%		3.4%	

Notes: E = Number of students enrolled.

G = Number of graduates.

N/A = Not available.

^a Breakdown by field of specialization not available.

^b Estimate.

Sources: Survey of Vocational Education and Training, DBS, 1950 to 1960, Table 12, p. 32.
See also Tables 7 and 12 for Age Distribution of the population.

Table 24--Enrolment In and Graduation From Publicly-Sponsored Post-Secondary Technical Courses, by Type of Course, Nova Scotia and New Brunswick, 1959/60 and 1960/61

	Length of Course Years	Number of Graduates		Full-Time Enrolment		
		1959/60	1960/61	1959/60	1960/61	1961/62
<u>Nova Scotia^a</u>						
Land surveying.....	2	4	14	15	30	32
<u>New Brunswick</u>						
Architectural draughting ^b	1	9)	9	10)
Mechanical draughting ^b	1	4)	7	6)
Mechanical technology.....	2	3	4	7	7	15
Radio and television service ^b ..	1	22	-	25	27	17
Business technology.....	2	-	2	8	11	20

^a Starting in 1961/62, two new courses were introduced in architectural draughting and mechanical draughting, each of two years' duration. Not mentioned in these statistics for post-secondary course in Nova Scotia are others which are locally and not provincially sponsored, such as radio and television servicing, bookkeeping, stenography and clerical.

^b Starting in Fall of 1961 these courses were extended to two years in duration.

Source: Canadian Technical Institutes, DBS, 1959 to 1961.

Table 25--Indentured Apprentices in Skilled Trades--Nova Scotia, New Brunswick,
Ontario and Canada Years 1950 and 1960

Trade	Nova Scotia		New Brunswick		Ontario		Canada	
	1950	1960	1950	1960	1950	1960	1950	1960
<u>Automotive</u>	96	171	99	364	1,782	3,119	3,560	6,732
I ^a								
C ^a	6	30	2	50	302	539	621	1,161
Auto body and fender repair.....	-	53	11	85	-	-	164	601
I.....	-	4	-	18	-	-	33	113
C.....	-	-	-	-	-	-	-	-
Motor vehicle repair.....	96	118	88	279	1,782	3,119	3,396	6,131
I.....								
C.....	6	26	2	32	302	539	588	1,048
<u>Building Construction</u>	128	237	198	268	1,134	1,785	3,068	5,610
I.....								
C.....	18	39	33	43	216	366	589	1,205
Bricklaying and masonry.....	8	20	12 ^d	18 ^d	143 ^e	111 ^e	309	409
I.....								
C.....	-	7	7	4	45	42	89	131
Carpentry.....	66 ^a	98 ^a	50	99	283	290	996	1,514
I.....								
C.....	6	20	7	17	70	85	187	391
Painting and decorating.....	-	-	7	2	42	61	150	257
I.....								
C.....	-	-	-	-	12	16	43	70
Plastering.....	9	-	-	-	92	108	247	283
I.....								
C.....	-	-	-	-	11	20	44	75
Plumbing and pipefitting.....	37	90	129	149	462	864	1,161	2,399
I.....								
C.....	12	9	19	22	63	151	191	441
Steamfitting.....	8	29	-	-	112	351	205	748
I.....								
C.....	-	3	-	-	15	52	35	97
<u>Mechanical and Metalworking</u>	33	58	38	132	246	601	862	2,376
I.....								
C.....	7	13	5	35	34	129	165	572
Instrument making.....	2	-	-	6	6	34	8	41
I.....								
C.....	-	-	-	-	1	8	1	9
Lathing.....	-	-	-	-	-	71	10	91
I.....								
C.....	-	-	-	-	-	6	-	13
Machinists.....	31	55	19	23	42	105	269	437
I.....								
C.....	7	12	4	7	3	54	58	141
Millwrights.....	-	-	2	23	-	26	2	85
I.....								
C.....	-	-	1	8	-	5	1	32

Table 25--Continued

Trade	Nova Scotia		New Brunswick		Ontario		Canada ^f	
	1950	1960	1950	1960	1950	1960	1950	1960
<u>Mechanical and Metalworking (Cont.)</u>								
Sheet metal.....	-	2	17	22	193	357	552	1,001
	-	1	-	13	30	54	105	176
Welding.....	-	-	-	58	5	8	21	721
	-	-	-	7	-	2	-	201
<u>Electrical</u>	80	161	24	256	547	1,146	1,273	3,207
	-	21	6	69	108	284	246	659
Electrical construction.....	80 ^c	118	24	164	523	1,014	1,234	2,927
	-	10	6	33	108	254	244	581
Electrical maintenance.....	-	43 ^b	-	92	24	132	39	280
	-	11	-	36	-	30	2	78
<u>Service</u>	-	-	-	-	116	450	246	705
	-	-	-	-	44	77	90	184
Barbering.....	-	-	-	-	15	49	64	159
	-	-	-	-	2	10	19	74
Hairdressing and beauty culture..	-	-	-	-	101	401	182	546
	-	-	-	-	42	67	71	110
<u>Other</u>	27	57	24	64	93	91	473	913
	4	8	1	11	10	38	96	223
Draughting.....	-	1	-	5	-	31	-	38
	-	1	-	2	-	28	-	31
Printing.....	-	-	4	7	2	7	88	27
	-	-	-	1	-	1	11	8
Refrigeration.....	1	-	-	-	2	13	13	81
	-	-	-	-	-	-	-	15

Table 25--Concluded

Trade	Nova Scotia		New Brunswick		Ontario		Canada ^f	
	1950	1960	1950	1960	1950	1960	1950	1960
Other (Cont.)								
Stationary engineering.....	I	-	-	39	-	2	-	214
	C	-	-	1	-	-	-	54
Miscellaneous.....	I	26	20	13	89	38	372	553
	C	4	1	7	10	9	85	115
Total.....	I	364	383	1,084	3,918	7,192	9,482	19,543
	C	35	47	208	714	1,433	1,807	4,004

★ I = Indentured apprentices as of Sept. 30.

★ C = Completed during the twelve-month period preceding Sept. 30.

a Includes joiners.

b Includes marine electricians.

c Includes electrical maintenance.

d Includes plastering.

e Includes tiling.

f Excludes Quebec.

Source: Survey of Vocational Education and Training, DBS, 1959/60, Tables 24, 26, 27, 28, pp. 44, 46, 47, 48.

Table 26--The Labour Force by Industry Group, Sex, and Years of Schooling, Canada, 1951

	Years of Schooling										Total	
	0-4		5-8		9-12		13 & Over					
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Agricultural.....	98,008	11.9	529,220	64.0	183,160	22.1	16,642	2.0	827,030	100.0		
Males.....	93,899	11.9	508,533	64.2	173,996	22.0	15,503	1.9	791,931	100.0		
Females.....	4,109	11.7	20,687	58.9	9,164	26.1	1,139	3.3	35,099	100.0		
Forestry & logging.....	28,369	21.9	74,275	57.2	23,305	18.0	3,883	2.9	129,832	100.0		
Males.....	28,130	22.1	73,249	57.5	22,373	17.5	3,736	2.9	127,488	100.0		
Females.....	239	10.2	1,026	43.8	932	39.7	147	6.3	2,344	100.0		
Fishing & trapping.....	16,537	32.7	25,493	50.4	7,864	15.5	685	1.4	50,579	100.0		
Males.....	16,475	32.8	25,332	50.5	7,729	15.4	638	1.3	50,174	100.0		
Females.....	62	15.3	161	39.8	135	33.3	47	11.6	405	100.0		
Mining & quarrying.....	11,528	11.1	51,112	49.2	32,751	31.5	8,457	8.2	103,848	100.0		
Males.....	11,492	11.3	50,820	50.1	31,196	30.7	8,012	7.9	101,520	100.0		
Females.....	36	1.5	292	12.6	1,555	66.8	445	19.1	2,328	100.0		
Manufacturing.....	83,574	6.1	633,444	46.6	539,995	39.7	103,649	7.6	1,360,662	100.0		
Males.....	74,038	6.8	510,323	47.0	413,457	38.1	88,093	8.1	1,085,911	100.0		
Females.....	9,536	3.5	123,121	44.8	126,538	46.0	15,556	5.7	274,751	100.0		
Electricity, gas, water.....	4,082	6.6	23,788	38.5	26,064	42.2	7,880	12.7	61,814	100.0		
Males.....	4,047	7.2	23,353	41.3	22,204	39.3	6,868	12.2	56,472	100.0		
Females.....	35	0.7	435	8.1	3,860	72.3	1,012	18.9	5,342	100.0		
Construction.....	34,226	9.8	186,214	53.1	113,137	32.2	17,319	4.9	350,896	100.0		
Males.....	34,144	9.9	185,269	53.7	109,018	31.6	16,458	4.8	344,889	100.0		
Females.....	82	1.4	945	15.7	4,119	68.6	861	14.3	6,007	100.0		
Transp. stor. & comm.....	23,924	8.0	167,686	41.6	185,227	46.0	25,870	6.4	402,707	100.0		
Males.....	23,576	8.6	160,617	45.4	148,979	42.1	20,773	5.9	353,945	100.0		
Females.....	348	0.7	7,069	14.5	36,248	74.3	5,097	10.5	48,762	100.0		

Table 26--Concluded

	Years of Schooling								Total	
	0-4		5-8		9-12		13 & Over			
	No.	%	No.	%	No.	%	No.	%	No.	%
Trade.....	23,346	3.3	229,361	32.3	382,979	54.0	74,082	10.4	709,768	100.0
Males.....	20,490	4.1	175,042	35.1	245,039	49.2	57,554	11.6	498,125	100.0
Females.....	2,856	1.3	54,319	25.7	137,940	65.2	16,528	7.8	211,643	100.0
Finance, ins. & real estate.	1,393	1.0	16,944	11.7	95,138	66.1	30,520	21.2	143,995	100.0
Males.....	1,023	1.3	12,154	15.2	46,130	57.6	20,720	25.9	80,027	100.0
Females.....	370	0.6	4,790	7.5	49,008	76.6	9,800	15.3	63,968	100.0
Service.....	44,833	4.2	315,101	29.2	468,868	43.5	248,663	23.1	1,077,465	100.0
Males.....	28,254	4.9	172,975	30.0	229,830	39.8	145,746	25.3	576,805	100.0
Females.....	16,579	3.3	142,126	28.4	239,038	47.7	102,917	20.6	500,660	100.0
All industries.....	377,643	7.1	2,285,345	43.2	2,080,684	39.4	542,481	10.3	5,286,153	100.0
Males.....	342,688	8.3	1,924,761	46.7	1,466,542	35.6	387,841	9.4	4,121,832	100.0
Females.....	34,955	3.0	360,584	31.0	614,142	52.7	154,640	13.3	1,164,321	100.0

Source: Census of Canada, Vol. IV, Table 19.

Table 27--The Labour Force by Industry Group, Sex and Years of Schooling, New Brunswick, 1951

	Years of Schooling									
	0-4		5-8		9-12		13 & Over		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Agriculture.....	6,069	22.6	16,090	60.0	4,369	16.3	306	1.1	26,834	100.0
Males.....	5,981	22.6	15,892	60.2	4,240	16.1	290	1.1	26,403	100.0
Females.....	88	20.4	198	46.0	129	29.9	16	3.7	431	100.0
Forestry & logging.....	5,546	34.4	8,736	54.2	1,697	10.5	139	0.9	16,118	100.0
Males.....	5,512	34.5	8,671	54.2	1,656	10.4	137	0.9	15,976	100.0
Females.....	34	23.9	65	45.8	41	28.9	2	1.4	142	100.0
Fishing & trapping.....	915	20.5	2,669	59.9	797	17.9	77	1.7	4,458	100.0
Males.....	912	20.6	2,658	60.2	777	17.6	72	1.6	4,419	100.0
Females.....	3	7.7	11	28.2	20	51.3	5	12.8	39	100.0
Mining & quarrying.....	296	24.8	686	57.4	192	16.1	20	1.7	1,194	100.0
Males.....	296	25.1	683	58.0	179	15.2	20	1.7	1,178	100.0
Females.....	-	-	3	18.8	13	81.2	-	-	16	100.0
Manufacturing.....	4,044	13.0	16,623	53.3	9,545	30.6	970	3.1	31,182	100.0
Males.....	3,738	14.2	14,212	54.1	7,450	28.4	864	3.3	26,264	100.0
Females.....	306	6.2	2,411	49.0	2,095	42.6	106	2.2	4,918	100.0
Electricity, gas & water.....	143	8.6	781	47.3	621	37.6	107	6.5	1,652	100.0
Males.....	143	9.1	774	49.4	549	35.0	101	6.5	1,567	100.0
Females.....	-	-	7	8.2	72	84.7	6	7.1	85	100.0
Construction.....	1,465	14.5	5,980	59.2	2,391	23.7	259	2.6	10,095	100.0
Males.....	1,463	14.7	5,968	59.8	2,297	23.0	249	2.5	9,977	100.0
Females.....	2	1.7	12	10.1	94	79.7	10	8.5	118	100.0
Transp. stor. & comm.....	1,343	8.1	8,145	48.7	6,670	39.9	558	3.3	16,716	100.0
Males.....	1,329	8.7	7,986	52.3	5,469	35.8	483	3.2	15,267	100.0
Females.....	14	0.9	159	11.0	1,201	82.9	75	5.2	1,449	100.0

Table 28--The Labour Force in Selected Industries, by Sex and Years of Schooling, Canada and New Brunswick, 1951

Industry	Years of Schooling										Total	
	0-4		5-8		9-12		13 & Over					
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
<u>Canada</u>												
Food & beverages.....	9,753	6.5	71,526	47.5	59,115	39.3	10,087	6.7	150,481	100.0		
Males.....	8,318	7.1	56,800	48.2	44,290	37.6	8,410	7.1	117,818	100.0		
Females.....	1,435	4.4	14,726	45.1	14,825	45.4	1,677	5.1	32,663	100.0		
Wood products.....	16,719	11.5	79,753	54.8	43,685	30.0	5,472	3.7	145,629	100.0		
Males.....	16,466	12.0	76,554	55.9	39,003	28.5	4,881	3.6	136,904	100.0		
Females.....	253	2.9	3,199	36.6	4,682	53.7	591	6.8	8,725	100.0		
Paper products.....	8,101	9.0	41,122	45.7	33,221	36.9	7,528	8.4	89,972	100.0		
Males.....	7,865	10.0	36,585	46.6	27,353	34.8	6,720	8.6	78,523	100.0		
Females.....	236	2.1	4,537	39.6	5,868	51.3	808	7.0	11,449	100.0		
<u>New Brunswick</u>												
Food & beverages.....	891	12.6	3,936	55.6	2,093	29.6	161	2.2	7,081	100.0		
Males.....	669	14.2	2,627	55.6	1,288	27.3	138	2.9	4,722	100.0		
Females.....	222	9.4	1,309	55.5	805	34.1	23	1.0	2,359	100.0		
Wood products.....	1,249	18.8	3,888	58.5	1,400	21.0	112	1.7	6,649	100.0		
Males.....	1,242	19.2	3,841	59.5	1,268	19.7	101	1.6	6,452	100.0		
Females.....	7	3.5	47	23.9	132	67.0	11	5.6	197	100.0		
Paper products.....	998	19.7	2,241	44.2	1,489	29.4	337	6.7	5,065	100.0		
Males.....	992	20.8	2,190	45.9	1,271	26.7	315	6.6	4,768	100.0		
Females.....	6	2.0	51	17.2	218	73.4	22	7.4	297	100.0		

Source: Census of Canada, 1951, Vol. IV, Table 19.

APPENDIX B

<u>Table No.</u>	<u>Title</u>
29	Gross Provincial Product for New Brunswick, 1950 to 1960
30	Personal Income, Transfer Payments and Employment, Canada and New Brunswick, 1950 and 1959
31	New Capital Investment as a Percentage of Gross National and Gross Provincial Product, Canada and New Brunswick, 1950 to 1960
32	New Capital Investment per Worker, Canada and New Brunswick, 1950 to 1960
33	New Capital Investment per Worker in Selected Manufacturing Industries, Canada, Annual Averages, 1950 to 1960
34	Numerical Distribution of New Capital Investment by Industries, Canada and New Brunswick, 1950 to 1960
35	Percentage Distribution of New Capital Investment by Industries, Canada and New Brunswick, 1950 to 1960
36	Total Capital Investment Including Repair and Maintenance Expenditures, Canada and New Brunswick, 1950 to 1960
37	New Capital Investment Expenditures on Housing, Machinery and Equipment, and Other, New Brunswick and Canada, 1950 to 1960
38	Industrial Employment in New Brunswick, 1950 to 1960 Note on Methods Used to Compute Employment Estimates by Industry for June of Each Year 1950 to 1960, New Brunswick
39	Numerical and Percentage Distribution of Industrial Employment in New Brunswick, 1950 and 1960
40	Numerical and Percentage Distribution of Industrial Employment in Canada, June 1950 and June 1960
41	Ratio of Females to Total Employment by Industrial Groups, New Brunswick, 1951 and 1960
42	Labour Force in Each Industry Group, by Occupation Group, New Brunswick, 1951
43	Percentage Distribution of the Labour Force in Each Occupational Group, by Industry Group, New Brunswick, 1951
44	Percentage Distribution of the Labour Force in Each Industry Group, by Occupational Group, New Brunswick, 1951

Table 29--Gross Provincial Product for New Brunswick,
1950 to 1960

Year	Gross Provincial Product in Millions Constant (1956) Dollars	Index of Growth
1950	471	100
1951	483	103
1952	482	102
1953	495	105
1954	507	108
1955	541	115
1956	584	124
1957	565	120
1958	544	115
1959	577	123
1960	596	123

Source: The Economy of the Atlantic Provinces
1940 to 1958, by A.C. Parks, Atlantic
Provinces Economic Council. Figures for
1959 and 1960 were supplied by Mr. Parks.

Table 30--Personal Income, Transfer Payments and
Employment, Canada and New Brunswick,
1950 and 1959

	Canada	New Brunswick
Personal income (\$millions)		
1950.....	13,428	348
1959.....	26,319	580
Employment (thousands)		
1950.....	4,742	155
1959.....	6,038	168
Personal income per worker (dollars)		
1950.....	2,832	2,246
1959.....	4,359	3,452
Transfer payments (\$millions)		
1950.....	1,030	38
1959.....	2,756	95
Personal income less transfer payments. (\$millions)		
1950.....	12,398	310
1959.....	23,463	485
Personal income less transfer payments per worker (dollars)		
1950.....	2,615	2,000
1959.....	3,886	2,887
Increase in personal income per worker 1950 to 1959 (per cent).....	53.9	53.7
Increase in personal income per person less transfer payment 1950 to 1959 (per cent).....	48.6	44.4

Sources: National Accounts, DBS, various issues;
Labour Force Survey, June 1950 and June
1959.

Estimates of Employment by Industry,
New Brunswick prepared by the Federal
Department of Labour.

Table 31--New Capital Investment as a Percentage of Gross National and Gross Provincial Product, Canada and New Brunswick, 1950 to 1960

Year	Canada			New Brunswick		
	Gross National Product	New Capital Investment	Rate of Investment	Gross Provincial Product	New Capital Investment	Rate of Investment
	(\$millions)		(per cent)	(\$millions)		(per cent)
1950.....	18,006	3,815	21.2	379	114	30.1
1951.....	21,170	4,577	21.6	433	112	25.9
1952.....	23,995	5,285	22.0	452	104	23.0
1953.....	25,020	5,841	23.3	467	109	23.3
1954.....	25,368	5,620	22.2	489	119	24.3
1955.....	27,132	6,350	23.4	525	168	32.0
1956.....	30,585	8,024	26.2	584	186	31.8
1957.....	31,909	8,717	27.3	590	160	27.1
1958.....	32,894	8,364	25.4	578	181	31.3
1959.....	34,784	8,417	24.2	631	203	32.2
1960.....	35,928	8,262	23.0	658	181	27.5
Average 1950 to 1960..	27,890	6,661	23.9	526	149	28.3

Sources: National Accounts Income and Expenditure, 1957 to 1961, DBS.
 Private and Public Investment in Canada, Department of Trade and Commerce, various issues.
 The Economy of the Atlantic Provinces, 1940 to 1958, by A.C. Parks, Atlantic Provinces Economic Council. Figures for 1959 and 1960 were supplied by Mr. Parks.

Table 32--New Capital Investment per Worker, Canada and New Brunswick, 1950 to 1960

	1960	1959	1958	1957	1956	1955	1954	1953	1952	1951	1950	Average 11 Years (1950 to 1960)
<u>Canada</u>												
New capital investment (\$millions).....	8,262	8,417	8,364	8,717	8,024	6,350	5,620	5,841	5,285	4,577	3,815	6,661
Employment (LFS June) (thousands).....	6,139	6,038	5,863	5,912	5,716	5,497	5,361	5,359	5,222	5,142	4,742	5,545
NCI per worker (dollars).....	1,346	1,394	1,427	1,474	1,404	1,155	1,048	1,090	986	890	805	1,184
<u>New Brunswick</u>												
New capital investment (\$millions).....	181	203	181	160	186	168	119	109	104	112	114	149
Employment (thousands)	178.6	171.5	166.8	172.2	175.2	167.9	162.4	166.1	160.8	165.1	156.2	167.5
NCI per worker (dollars).....	1,013	1,184	1,085	929	1,062	1,001	733	656	647	678	730	883

Sources: New capital investment, Public and Private Investment in Canada, Department of Trade and Commerce.
Employment in Canada, Labour Force Survey, DES, June of each year.
Employment in New Brunswick, see Appendix B, Table 38.

Table 33--New Capital Investment per Worker in Selected Manufacturing Industries, Canada, Annual Averages, 1950 to 1960

Type of Enterprise	Investment millions of \$ (1950-1960)	Employment Annual Averages 1950-1959	Investment per Worker
Food and beverages.....	104.7	180,805	579
Tobacco products.....	5.5	9,804	561
Rubber.....	13.1	21,821	600
Leather.....	2.8	31,471	89
Textile.....	29.6	70,813	418
Clothing.....	11.1	113,421	98
Wood.....	36.5	129,196	283
Paper.....	142.5	88,008	1,619
Printing.....	26.2	69,012	380
Iron & other metal products....	204.7	184,856	1,107
Transportation equipment.....	59.4	131,981	450
Electrical products.....	32.0	73,882	433
Non-metallic mineral products..	50.7	36,557	1,387
Petroleum & coal products.....	94.0	16,948	5,546
Chemical products.....	95.4	50,538	1,888
Total.....	908.2	1,209,113	751

Sources: "Private and Public Investment of Canada", Department of Trade and Commerce, 1950 to 1962, various issues - Total - Excludes - Non-ferrous & miscellaneous industries. "Manufacturing Industries of Canada", DBS, 1950 to 1959, various issues.

Table 34--Numerical Distribution of New Capital Investment by Industries, Canada and New Brunswick, 1950 to 1960
(millions of dollars)

Year	Canada						New Brunswick						Total	
	Primary Industries, & Construction	Manufacturing	Utilities	Trade, Finance & Commercial Services	Housing	Institutional Services & Government Departments	Total	Primary Industries, & Construction	Manufacturing	Utilities	Trade, Finance & Commercial Services	Housing		Institutional Services & Government Departments
1960.....	1,134	1,178	1,772	875	1,456	1,847	8,262	19	30	35	19	25	53	181
1959.....	1,074	1,144	1,842	833	1,752	1,772	8,417	18	55	31	16	30	53	203
1958.....	997	1,095	2,153	705	1,782	1,632	8,364	15	25	32	12	39	58	181
1957.....	1,246	1,479	2,308	690	1,430	1,564	8,717	17	15	38	13	33	44	160
1956.....	1,306	1,394	1,724	611	1,575	1,414	8,024	26	17	45	12	31	55	186
1955.....	999	947	1,099	561	1,499	1,245	6,350	20	12	33	12	33	58	168
1954.....	809	822	1,124	582	1,178	1,105	5,620	14	8	25	15	20	37	119
1953.....	928	969	1,209	526	1,084	1,125	5,841	16	11	19	15	16	32	109
1952.....	878	973	1,159	344	826	1,105	5,285	14	14	27	9	12	28	104
1951.....	820	793	900	412	821	831	4,577	15	18	24	7	20	28	112
1950.....	697	502	720	397	845	654	3,815	14	8	16	6	37	33	114
Average 1950 to 1960..	990	1,027	1,455	594	1,295	1,300	6,661	17	19	30	12	27	44	149

Source: Private and Public Investment in Canada; 1952 to 1962; Department of Trade and Commerce, various issues.

Table 35---Percentage Distribution of New Capital Investment by Industries, Canada and New Brunswick, 1950 to 1960
(per cent)

Year	Canada							New Brunswick						
	Primary Industries, & Construction	Manufacturing	Utilities	Trade, Finance & Commercial Services	Housing	Institutional Services & Government Departments	Total	Primary Industries, & Construction	Manufacturing	Utilities	Trade, Finance & Commercial Services	Housing	Institutional Services & Government Departments	Total
1960.....	14	14	21	11	18	22	100	10	17	20	10	14	29	100
1959.....	13	13	22	10	21	21	100	9	27	15	8	15	26	100
1958.....	12	13	26	8	21	20	100	8	14	18	7	21	32	100
1957.....	14	17	27	8	16	18	100	11	9	24	8	21	27	100
1956.....	16	17	21	8	20	18	100	14	9	24	6	17	30	100
1955.....	16	15	17	9	23	20	100	12	7	20	7	20	34	100
1954.....	14	15	20	10	21	20	100	12	7	21	12	17	31	100
1953.....	16	17	21	9	18	19	100	15	10	17	14	15	29	100
1952.....	17	18	22	6	16	21	100	13	13	26	9	12	27	100
1951.....	18	17	20	9	18	18	100	13	16	22	6	18	25	100
1950.....	18	13	19	11	22	17	100	12	7	14	5	33	29	100
Average 1950 to 1960..	15	15	21	9	19	19	100	12	12	20	8	18	29	100

Source: Private and Public Investment in Canada, 1952 to 1962; Department of Trade and Commerce various issues.

Table 37--New Capital Investment Expenditures on Housing, Machinery and Equipment, and Other,
New Brunswick and Canada, 1950 to 1960

Year	New Brunswick				Canada		
	Housing		Machinery & Equipment	Other	Housing	Machinery & Equipment	Other
	\$Millions	% of Total					
1960	25.1	13.9	61.2	33.9	18	34	48
1959	29.7	14.6	65.7	32.4	21	32	47
1958	39.2	16.1	49.6	27.4	21	30	49
1957	33.0	20.7	51.4	32.2	16	34	50
1956	31.5	16.9	50.2	26.9	20	34	46
1955	33.1	19.7	42.2	25.2	23	32	45
1954	19.9	16.7	41.3	34.6	21	34	45
1953	16.1	14.8	36.2	33.4	19	37	44
1952	12.4	11.9	49.5	47.5	16	38	46
1951	19.7	17.6	49.8	44.4	18	40	42
1950	37.2	32.7	32.4	28.5	22	38	40

Source: Private and Public Investment in Canada, Department of Trade and Commerce, various issues.

Table 38--Industrial Employment in New Brunswick, 1950 to 1960
(estimates in thousands)

Industries	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
Agriculture.....	27.9	26.8	25.6	24.7	23.8	23.0	22.1	21.3	20.5	19.6	18.8
Fishing (primary).....	4.5	4.4	4.0	4.5	4.1	4.3	4.1	3.5	2.6	2.6	2.7
Forestry (chiefly logging).....	10.2	15.8	11.1	14.3	13.3	13.9	15.9	15.0	11.3	11.0	10.2
Mining.....	1.4	1.2	1.2	1.3	1.4	1.7	1.8	1.7	1.2	1.3	1.3
Coal.....	1.1	0.9	1.0	1.0	0.9	1.0	1.0	1.0	0.8	1.0	
Other.....	0.3	0.3	0.2	0.3	0.5	0.7	0.8	0.7	0.4	0.3	
Manufacturing.....	30.1	30.8	30.7	31.1	28.3	28.8	29.0	27.1	26.9	27.5	28.0
Food and beverages.....	6.9	7.0	6.8	6.5	6.9	6.7	6.7	6.5	6.7	6.8	
Fish processing.....	3.0	3.3	3.0	2.6	3.0	2.8	2.8	2.3	2.6	2.7	
Other.....	3.9	3.7	3.8	3.9	3.9	3.9	3.9	4.2	4.1	4.1	
Textiles.....	2.0	2.1	1.9	1.7	0.5	0.7	0.8	0.4	0.4	0.4	
Clothing.....	1.4	0.6	0.5	1.0	0.9	0.9	0.9	1.0	1.0	1.1	
Wood products.....	6.7	6.6	6.1	6.7	5.2	5.3	5.3	4.7	4.4	4.7	
Sash, door and planing mills....	1.2	1.1	1.0	1.1	1.0	0.9	0.8	0.7	0.7	0.7	
Sawmills.....	5.0	4.8	4.5	5.2	3.9	4.1	4.3	3.7	3.3	3.7	
Other.....	0.5	0.7	0.5	0.3	0.4	0.3	0.2	0.3	0.4	0.3	
Paper products.....	4.7	5.0	4.9	5.0	5.3	5.5	5.7	5.4	5.3	5.4	
Pulp and paper.....	4.5	4.8	4.7	4.9	5.1	5.3	5.6	5.2	5.1	5.1	
Other.....	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.3	
Iron and steel products.....	1.6	1.5	1.5	1.5	1.4	1.5	1.7	1.6	1.6	1.6	
Transportation equipment.....	3.6	4.4	4.8	4.9	4.2	4.0	3.6	3.4	3.0	2.7	
Non-metallic mineral products.....	1.0	0.9	1.3	1.5	1.3	1.3	1.4	1.3	1.4	1.5	
Other manufacturing.....	2.2	2.7	2.9	2.3	2.0	2.9	3.9	2.8	3.1	3.3	
Public utilities.....	1.5	1.6	1.6	1.7	1.8	1.9	2.0	2.0	2.1	2.3	2.4
Construction.....	8.3	9.8	8.8	9.8	9.6	12.9	13.7	11.5	11.3	11.1	13.1
Buildings and structures.....	3.7	7.8	4.8	5.3	5.1	7.1	7.0	6.4	6.0	5.1	4.7
Highways, bridges and streets.....	4.6	2.0	4.0	4.5	4.5	5.8	6.6	5.1	5.3	6.0	8.4

Table 38--(Concl'd)

Industries	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
Transportation, storage and communications.....	14.7	16.2	16.7	16.7	16.2	15.8	16.8	16.9	16.3	16.4	15.8
Steam railways.....	8.5	9.1	9.4	9.3	8.7	8.2	9.1	9.1	8.4	8.4	7.7
Other.....	6.2	7.1	7.3	7.4	7.5	7.6	7.7	7.8	7.9	8.0	8.1
Finance, insurance & real estate....	2.4	2.7	2.9	2.7	2.9	2.9	2.9	3.0	3.0	3.1	3.2
Trade.....	21.7	22.0	22.9	23.1	23.0	23.3	25.4	26.6	25.6	27.4	28.2
Wholesale.....	6.2	6.4	6.7	6.6	6.8	6.8	7.6	7.8	7.8	8.2	
Retail.....	15.5	15.6	16.2	16.5	16.2	16.5	17.8	18.7	17.8	19.2	
Service.....	32.4	32.7	34.2	35.1	36.9	38.3	40.4	42.5	44.9	48.1	53.8
Not stated.....	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Total.....	156.2	165.1	160.8	166.1	162.4	167.9	175.2	172.2	166.8	171.5	178.6

Source: See Note following on Methods Used to Compute Employment Estimates.

Note on Methods Used to Compute Employment Estimates by Industry for
June of Each Year 1950 to 1960, New Brunswick

1. Agriculture

The 1951 and 1956 figures are from the decennial census. Those for 1952 to 1955 were arrived at by distributing evenly the change between 1951 and 1956 for each intervening year. An estimate of the number of farms for 1959 was obtained from the New Brunswick Department of Agriculture and the local representatives of the federal Department of Agriculture. The difference between 1956 and 1959 was distributed evenly over the intervening years. The estimate for 1950 was provided by the New Brunswick Department of Agriculture.

2. Fishing (primary)

Employment statistics provided in "Fisheries Statistics of Canada" DBS Annual were used to project the 1951 census figure. No allowance was made for any change in the June seasonal value, if any. The formula used was $E = \frac{e}{e_1} \times e_n$ where E = employment for any year, and

e = employment in the 1951 census

e_1 = employment in 1951 from other source (in this case "Fisheries Statistics of Canada")

e_n = employment any year from other source (in this case "Fisheries Statistics of Canada").

Example to estimate employment in Primary Fishing in 1952:

$e = 4,400$ (census of Canada)

$e_1 = 10,408$ (The Fisheries Statistics of Canada, 1951)

$e_n = 9,492$ (The Fisheries Statistics of Canada 1952)

$$E = \frac{e}{e_1} \times e_n$$

$$= \frac{4,400}{10,408} \times 9,492 = 4,000$$

3. Forestry (chiefly logging)

- (a) Source of data: Employment and Payrolls, DBS for June of each year.
- (b) Method: same as for Fishing.

Note (Continued)

4. Mining

- (a) Source of data: "Review of Mining" for each year.
- (b) Method: Same as Fishing for Total and Coal Mining. "Other" mining employment is a residual.

5. Manufacturing

- (a) Source of data: "Manufacturing Industries of Canada: Section B Atlantic Provinces" for each year.
- (b) Method: For Total manufacturing and the identified sub-groups the same method as for Fishing. "Other" manufacturing is a residual.

6. Public Utilities

- (a) Source: "Electric Power Statistics", DBS annual.
- (b) Method: Same as for Fishing, except that it was assumed that the whole sector had moved the same as that of Electricity Generation.

7. Construction

- (a) Source: "Construction in Canada", DBS annual.
- (b) Method: Using same method as for Fishing, an estimate of total employment in construction was made. This estimate was then adjusted to allow for changes in the seasonal value of the June figures each year using the seasonal index from "Employment and Payrolls" DBS publication. To arrive at the two sub-groups, it was assumed that the distribution of employment between the two sub-groups is the same as the distribution of the value of construction for each sub-group.

8. Transportation, Storage and Communications

- (a) Source: "Employment and Payrolls", DBS for June of each year.
- (b) Method: Same as for Fishing for Total and for Steam Railways. "Other" transportation, storage and communications is a residual.

9. Finance, Insurance and Real Estate

- (a) Source: There are no published statistics on this industry for the province of New Brunswick. Employment and Payrolls, DBS gives data for the province of Nova Scotia. It was assumed that employment would have increased at the same rate in New Brunswick.
- (b) Method: Same as for Fishing.

Note (Concluded)

10. Trade

- (a) Source: Employment and Payrolls, DBS.
- (b) Method: Same as for Fishing for Total and Retail Trade. The employment estimate for Wholesale Trade is a residual.

11. Service

- (a) Source: There are no published statistics on the service sector for New Brunswick. Unpublished estimates of paid workers prepared by the Dominion Bureau of Statistics were used as an index of change.
- (b) Method: Same as for "Fishing".

Table 39--Numerical and Percentage Distribution of Industrial
Employment in New Brunswick, 1950 and 1960

Industry	1950		1960	
	Number (thousands)	Per Cent	Number (thousands)	Per Cent
1. Agriculture.....	27.9	18.0	18.8	10.6
2. Fishing (primary).....	4.5	2.9	2.7	1.5
3. Forestry (chiefly logging).....	10.2	6.6	10.2	5.7
4. Mining.....	1.4	0.9	1.3	0.7
Total - primary industries (1 to 4).....	44.0	28.4	33.0	18.5
5. Manufacturing.....	30.1	19.4	38.0	15.8
6. Construction.....	8.3	5.3	13.1	7.4
Total - goods-producing industries (1 to 6).....	82.4	53.1	74.1	41.7
7. Public utility.....	1.5	1.0	2.4	1.4
8. Transportation, storage, communication.....	14.7	9.5	15.8	8.9
9. Trade.....	21.7	14.0	28.2	15.9
10. Finance, insurance, real estate.	2.4	1.5	3.2	1.8
11. Service.....	32.4	20.9	53.8	30.3
Total - service-producing industries (7 to 11).....	72.7	46.9	103.4	58.3
All Industries.....	155.1	100.0	177.5	100.0

Source: See Table 38 in Appendix B.

Table 40--Numerical and Percentage Distribution of Industrial
Employment in Canada, June 1950 and June 1960

Industry Group	1950		1960	
	Number (thousands)	Per Cent	Number (thousands)	Per Cent
1. Agriculture.....	1,066	21.1	682	11.1
2. Fishing (primary).....	50	1.0	26	0.4
3. Forestry (chiefly logging).....	60	1.2	103	1.7
4. Mining.....	72	1.4	98	1.6
Total - primary industries (1 to 4).....	1,248	24.8	909	14.8
5. Manufacturing.....	1,316	26.1	1,523	24.8
6. Construction.....	339	6.7	495	8.1
Total - goods-producing industries (1 to 6).....	2,903	57.6	2,927	47.7
7. Public utility.....	45	0.9	78	1.3
8. Transportation, storage & communication.....	375	7.4	455	7.4
9. Trade.....	641	12.7	973	15.8
10. Finance, insurance & real estate.	146	2.9	225	3.7
11. Service.....	933	18.5	1,481	24.1
Total - service-producing industries (7 to 11).....	2,140	42.4	3,212	52.3
All Industries.....	5,043	100.0	6,139	100.0

Source: The Labour Force Survey, DBS, June 1950 and June 1960.

Table 41--Ratio of Females to Total Employment by Industrial Groups,
New Brunswick, 1951 and 1960

Industrial Groups	1951			1960	1960
	Both Sexes	Females	Per Cent	Estimated Employment Both Sexes	Estimated Employment Female
				(thousands)	(number)
Agriculture.....	26,757	430	2	18.8	376
Forestry (chiefly logging).....	15,771	140	1	10.2	102
Fishing (primary).....	4,408	38	1	2.7	27
Mining.....	1,176	16	1	1.3	13
Coal.....	915	10	1		
Other.....	261	6	2		
Manufacturing.....	30,839	4,879	16	28.0	4,480
Food & beverages.....	6,985	2,335	33		
Fish processing.....	3,296	1,357	41		
Other.....	3,689	978	27		
Textiles.....	2,072	856	41		
Clothing.....	557	420	75		
Wood products.....	6,566	197	3		
Sash, door & planing mills.....	1,114	61	5		
Sawmills.....	4,779	96	2		
Other.....	673	40	6		
Paper products.....	5,027	294	6		
Pulp & paper.....	4,823	225	5		
Other.....	204	69	34		
Iron & steel products.....	1,526	72	5		
Transportation equipment.....	4,886	65	1		
Non-metallic mineral products..	931	41	4		
Other manufacturing.....	2,289	599	26		
Public utilities.....	1,626	85	5	2.4	120
Construction.....	9,790	117	1	13.1	131
Building & structures ⁽¹⁾	7,750	106	1	4.7	47
Highways, bridges & streets....	2,040	11	1	8.4	84
Transportation, storage & communication.....	16,221	1,441	9	15.8	1,422
Steam railways.....	9,138	371	4	7.7	308
Other.....	7,083	1,070	15	8.1	1,215

Table 41--(Concluded)

Industrial Groups	1951			1960	1960
	Both Sexes	Females	Per Cent	Estimated Employment Both Sexes	Estimated Employment Female
				(thousands)	(number)
Trade.....	22,000	6,998	32	28.2	9,024
Wholesale.....	6,362	1,106	17		
Retail.....	15,638	5,892	38		
Finance, insurance & real estate.	2,683	1,178	44	3.2	1,408
Service.....	32,700	17,971	55	53.8	29,590
Not stated.....	1,171	236	20	1.1	220
All Industries.....	165,142	33,529	20	178.6	46,913

(1) Includes Others in Construction.

Source: Census of Canada for 1951, Vol. 5, Table 10 and Vol. 4, Table 16.

Table 42--Labour Force in Each Industry Group, by Occupation Group, New Brunswick, 1951

	All Occupations	Proprietary and Managerial	Professional	Clerical	Commercial and Financial	Transportation and Communication	Service	Manufacturing and Mechanical	Construction	Labourers	Agricultural	Logging	Fishing	Mining	Not Stated
All Industries.....	169,038	11,564	10,803	13,627	9,584	18,187	16,236	17,446	8,790	13,486	26,616	14,629	4,445	930	2,695
Agriculture.....	26,834	18	91	21	54	112	12	11	46	33	26,121	299	-	-	16
Forestry.....	16,118	605	66	133	21	713	412	212	36	183	24	13,676	-	-	37
Fishing.....	4,458	-	88	12	33	22	93	8	5	39	-	-	4,151	-	7
Mining.....	1,194	48	17	33	1	125	6	58	45	47	2	-	-	808	4
Manufacturing.....	31,164	1,363	601	2,096	1,166	2,308	460	13,709	1,643	6,708	78	576	240	22	194
Food & beverages.....	7,081	304	53	498	617	603	96	3,325	137	1,117	57	345	240	-	34
Wood products.....	6,649	415	53	311	59	795	140	1,627	339	2,524	6	-	-	-	35
Paper products.....	5,065	118	289	467	51	509	114	1,541	403	1,305	9	231	-	-	28
Other.....	12,369	526	206	820	439	401	110	7,216	764	1,762	6	-	-	22	97
Public utilities.....	1,652	77	69	229	19	514	74	125	130	385	1	1	-	7	22
Construction.....	10,095	432	101	271	27	796	91	292	5,644	2,316	4	18	-	75	28
Transportation, storage & communication.....	16,716	436	198	1,935	62	10,668	556	703	410	1,669	3	13	-	-	63
Trade.....	22,206	5,677	241	3,814	7,370	1,601	222	1,850	282	973	63	22	43	-	48
Wholesale.....	6,443	1,040	87	1,576	1,499	750	44	608	106	603	45	16	41	-	28
Retail.....	15,763	4,637	154	2,238	5,871	851	178	1,242	176	370	18	6	2	-	20
Finance.....	2,686	373	103	1,523	551	26	74	3	27	4	-	-	-	-	2
Service.....	32,927	2,457	9,207	3,525	216	1,212	14,196	402	502	754	309	6	-	1	140
Community & business.....	13,412	267	8,639	867	52	288	2,737	165	154	123	99	-	-	-	21
Government.....	8,722	1,179	483	2,297	48	763	2,874	174	282	494	34	6	-	1	87
Recreation.....	725	173	20	114	37	8	290	7	5	29	34	-	-	-	8
Personal.....	10,068	838	65	247	79	153	8,295	56	61	108	142	-	-	-	24
Unspecified.....	2,988	78	21	35	64	90	40	73	20	375	11	19	11	17	2,134

Source: Census of Canada, 1951, Vol. IV, Table 23.

Table 43--Percentage Distribution of the Labour Force in Each Occupational Group, by Industry Group, New Brunswick, 1951

	All Occupations	Proprietary and Managerial	Professional	Clerical	Commercial and Financial	Transportation and Communication	Service	Manufacturing and Mechanical	Construction	Labourers	Agricultural	Logging	Fishing	Mining	Not Stated
All Industries.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Agriculture.....	15.9	0.2	0.8	0.1	0.6	0.6			0.5	0.2	98.1	2.0			0.6
Forestry.....	9.5	5.2	0.6	1.0	0.2	3.9	2.5	2.4	0.4	1.4	0.1	93.5			1.4
Fishing.....	2.6		0.8		0.3	0.1	0.6			0.3			93.4	86.8	0.3
Mining.....	0.7	0.4	0.2	0.2		0.7		0.3	0.5	0.3	0.1				0.1
Manufacturing.....	18.4	11.7	5.6	15.4	12.1	12.7	2.9	77.6	18.8	49.7	0.2	4.0	5.4		7.2
Food & beverages.....	4.2	2.6	0.5	3.7	6.4	3.3	0.6	19.1	1.6	8.3	0.2				1.3
Wood products.....	3.9	3.6	0.5	2.3	0.6	4.4	0.9	9.3	3.9	18.7	0.2	2.4	5.4		1.3
Paper products.....	3.0	1.0	2.7	3.4	0.5	2.8	0.7	8.8	4.6	9.7		1.6			1.3
Other.....	7.3	4.5	1.9	6.0	4.6	2.2	0.7	40.4	8.7	13.0				2.4	1.0
Public utilities.....	1.0	0.7	0.6	1.7	0.2	2.8	0.4	0.7	1.5	2.9				0.8	0.8
Construction.....	6.0	3.7	0.9	2.0	0.3	4.4	0.6	1.7	64.2	17.2		0.1		8.1	1.0
Transportation, storage & communication.....	9.9	3.8	1.9	14.2	0.6	58.6	3.4	4.1	0.7	12.4	0.1	0.1			2.3
Trade.....	13.1	49.1	2.2	28.0	77.0	8.8	1.4	10.6	3.2	7.2	0.3	0.2	1.0		1.8
Wholesale.....	3.8	9.0	0.8	11.6	15.7	4.1	0.3	3.5	1.2	4.5	0.2	0.1	0.9		1.1
Retail.....	9.3	40.1	1.4	16.4	61.3	4.7	1.1	7.1	2.0	2.7	0.1	0.1	0.1		0.7
Finance.....	1.6	3.2	1.0	11.2	5.8		0.5		0.3						0.1
Service.....	19.5	21.3	85.3	25.9	2.2	6.8	87.5	2.2	5.7	5.6	1.1			0.1	5.2
Community & business.....	7.9	2.3	80.0	6.4	0.5	1.6	16.9	0.9	1.8	0.9	0.4				0.8
Government.....	5.2	10.2	4.5	16.9	0.5	4.2	17.7	1.0	3.2	3.7	0.1			0.1	3.2
Recreation.....	0.4	1.5	0.2	0.8	0.4	0.1	1.8			0.2	0.1				0.3
Personal.....	6.0	7.3	0.6	1.8	0.8	0.9	51.1	0.3	0.7	0.8	0.5	0.1			0.9
Unspecified.....	1.8	0.7	0.1	0.3	0.7	0.5	0.2	0.4	0.2	2.8		0.1	0.2	1.8	79.2

Source: Census of Canada, 1951, Vol. IV, Table 23.

Table 44--Percentage Distribution of the Labour Force in Each Industry Group,
by Occupational Group, New Brunswick, 1951

	All Occupations	Proprietary and Managerial	Professional	Clerical	Commercial and Financial	Transportation and Communication	Service	Manufacturing and Mechanical	Construction	Labourers	Agricultural	Logging	Fishing	Mining	Not Stated
All Industries.....	100.0	6.8	6.4	8.1	5.8	10.8	9.6	10.3	5.2	8.0	15.8	8.7	2.6	0.3	1.6
Agriculture.....	100.0		0.3	0.1	0.2	0.4	0.1	0.1	0.2	0.1	97.3	1.1			0.1
Forestry.....	100.0	3.8	0.4	0.8	0.2	4.4	2.6	1.3	0.2	1.1	0.2	84.8			0.2
Fishing.....	100.0		2.0	0.3	0.7	0.5	2.1	0.2	0.1	0.9			93.1	67.7	0.1
Mining.....	100.0	4.0	1.4	2.8	0.1	10.5	0.6	4.9	3.8	3.9	0.1	1.8	0.8	0.1	0.2
Manufacturing.....	100.0	4.4	1.9	6.7	3.7	7.4	1.5	44.0	5.3	21.5	0.4				0.4
Food and beverages.....	100.0	4.3	0.7	7.0	8.7	8.5	1.4	47.0	1.9	15.8	0.8	5.2	3.4	0.1	0.5
Wood products.....	100.0	6.2	0.7	4.7	0.9	12.0	2.1	24.5	5.1	38.0	0.1	4.6			0.5
Paper products.....	100.0	2.3	5.8	9.2	1.0	10.0	2.2	30.4	8.0	25.8	0.2				0.5
Other.....	100.0	4.3	1.7	6.6	3.5	3.2	0.9	58.3	6.2	14.2	0.1			0.2	0.8
Public utilities.....	100.0	4.6	4.2	13.9	1.1	31.1	4.5	7.6	7.9	23.3	0.1	0.2		0.4	1.3
Construction.....	100.0	4.3	1.0	2.7	0.3	7.9	0.9	2.9	55.9	22.9	0.1			0.7	0.2
Transportation, storage & communication.....	100.0	2.6	1.2	11.6	0.4	63.8	3.3	4.2	2.4	10.0		0.1			0.4
Trade.....	100.0	25.6	1.1	17.2	33.2	7.2	1.0	8.3	1.3	4.4	0.3	0.1	0.2		0.1
Wholesale.....	100.0	16.1	1.4	24.5	23.3	11.6	0.7	9.4	1.6	9.4	0.7	0.3	0.6		0.4
Retail.....	100.0	29.4	1.0	14.2	37.2	5.4	1.1	7.9	1.1	2.3	0.1	0.1	0.1		0.1
Finance.....	100.0	13.9	3.8	56.7	20.5	1.0	2.8	0.1	1.0	0.1					0.1
Service.....	100.0	7.5	28.0	10.7	0.6	3.7	43.1	1.2	1.5	2.3	0.9				0.5
Community & business..	100.0	2.0	64.4	6.5	0.4	2.1	20.4	1.2	1.1	0.9	0.8				0.2
Government.....	100.0	13.5	5.5	26.3	0.6	8.7	33.0	2.0	3.2	5.7	0.4	0.1			1.0
Recreation.....	100.0	23.9	2.8	15.7	5.1	1.1	40.0	1.0	0.7	4.0	4.6				1.1
Personal.....	100.0	8.4	0.6	2.5	0.8	1.5	82.4	0.6	0.6	1.1	1.4				0.1
Unspecified.....	100.0	2.6	0.7	1.2	2.1	3.0	1.3	2.4	0.7	12.6	0.4	0.6	0.4	0.6	71.4

Source: Census of Canada, 1951, Vol. IV, Table 23.

APPENDIX C

1. Questionnaire used July 1960 for Sample Survey of the Population of GLOUCESTER COUNTY, New Brunswick, Parts I, II and III.

Sample Survey of the Population of
Gloucester County, New Brunswick

PART I--To be completed for every member of the household 14 years of age and over.

1. Primary Sampling Unit

2. Segment Number

3. Household Number

4. Surname

Given Names

5. Relationship to head of household
 (such as, head, wife, son, daughter, ward, lodger, lodger's wife)

6. Was this person interviewed? Yes ☐ No ☐

7. (a) What did this person do mostly during the last week? Worked ^W ☐

Looked ^L
for work ☐

Had a job but ^J
not at work ☐

Unable ^U
to work ☐

Kept ^K
house ☐

Went to ^S
school ☐

Retired or ^R
voluntarily idle ☐

Other ☐

(b) Did this person do anything else during the past week?

Did some ^W
work ☐

Looked ^L
for work ☐

Had a job but ^J
not at work ☐

None ☐

8. Where did this person work over the past three-and-a-half years?

1960	Name of Employer	Location	Industry	Occupation	Earnings
July					
June					
May					
April					
March					
Feb.					
Jan.					

1959	Name of Employer	Location	Industry	Occupation	Earnings
Dec.					
Nov.					
Oct.					
Sept.					
Aug.					
July					
June					
May					
April					
March					
Feb.					
Jan.					

1958	Name of Employer	Location	Industry	Occupation	Earnings
Dec.					
Nov.					
Oct.					
Sept.					
Aug.					
July					
June					
May					
April					
March					
Feb.					
Jan.					

1957	Name of Employer	Location	Industry	Occupation	Earnings
Dec.					
Nov.					
Oct.					
Sept.					
Aug.					
July					
June					
May					
April					
March					
Feb.					
Jan.					

PART II—This part of the questionnaire is to be completed for all persons who on the basis of question 8 in PART I were not continuously employed over the last two years, provided that one of the periods of non-employment lasted for at least one month in one year. It should also be completed if the person has a non-work period of less than one month provided that the person is not currently employed.

A. 9. What grade did you complete in school? _____

10. (a) What is your principal occupation? _____

(b) Do you usually work in this occupation? _____

11. How did you acquire your skill in that occupation? _____

(a) Informal job experience _____

(b) Formal training (please specify type and length of training) _____

(c) Would you consider training if it were available in your area? _____

(d) What kind of training do you consider suitable? _____

- B. Select the latest non-work period which occurred in winter, or if none occurred then, the latest one which occurred at any other time.

12. Is it usual for you not to work during this period of _____
 Yes ☐ No ☐ write in non-work period
 examined

13. (a) What did you do during this period? (Give his answer in detail in his own words.)

(b) What did you do during other periods when you were not working?

14. Could you have taken a job during this period?

If Yes ☐

If No ☐

(a) Did you look for a job?

(a) Why not?

Yes ☐

No ☐

(b) If Yes, how did you look? _____

(c) If No, why not? _____

(d) What kind of a job would you have taken? _____

15. Could you have taken a job in these other periods of non-employment?

C. The following question should be completed for all members of the family where one, or more, of the members was not continuously employed. (Use one schedule for each person.)

16. Please list below the income for the 12 months preceding the beginning of the non-work period covered in PART II, plus the income received during the non-work period.

	a) Income for 12-month Period	b) Income During Non-work Period
(a) Wages and salaries (transfer amount from question 8)		
(b) Pension (specify type of pension) _____		
(c) Family allowance		
(d) Other income (specify) _____		
(e) Unemployment Insurance Benefits: (Record items 1 to 4 in question 8 as explained in the instruction manual)		
(1) Number of periods		
(2) Dates of periods		
(3) Weekly rates		
(4) Seasonal <input type="checkbox"/> Regular <input type="checkbox"/>		
(5) Total amount	\$	\$
(f) Total income	\$	\$

17. What are your plans for the future? _____
- _____
- _____

D. To be completed for all persons who answered "Yes" to question 14, in PART II-B

18. You said before that you could have taken a job during the period _____, are there any restrictions to the kind of job you could have taken?
- (1) Would you have worked away from your family? _____
- (2) How far away would you have travelled? _____
- (3) Would you have taken an outdoor job in bad weather? _____
- (4) Would you have taken a job which was not your usual occupation? _____
- (5) For what wage would you have worked? _____

PART III

Only One Schedule Per Household1. Primary Sampling Unit 2. Segment Number 3. Household No. 4. Does this household live on a farm? Yes ☐No ☐

5. Address _____

(a) _____
Street address(b) _____
City, town or village(c) _____
Parish or County(d) _____
Mailing address(e) _____
Other identification

6.

Line No.	Names of Household Members (surname first)	Relationship to Head of Household	Sex	Marital Status	Age Last Birthday
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					

7. How much rent do you pay per month? \$ _____
8. How much do you pay on your mortgage per month? _____
9. Is your house completely owned? Yes ☐ No ☐
10. How much land do you have? (a) improved _____ acres
(b) unimproved _____ acres
11. (a) What products did you sell in 1959? _____
(b) What was the value of the products sold in 1959? \$ _____
(c) What was the value of the products consumed at home in 1959? \$ _____
12. (a) Do you have a wood lot? Yes ☐ No ☐
(b) What was the value of wood sold in 1959? \$ _____
(c) What was the value of wood consumed in the home in 1959? \$ _____
13. (a) Do you have a fishing boat? Yes ☐ No ☐
(b) Do you do any fishing? Yes ☐ No ☐
(c) What was the value of fish sold in 1959? \$ _____
(d) What was the value of fish consumed at home in 1959? \$ _____
14. How long have you lived in _____? _____ years. If less than three years:
(a) Where did you move from? _____

(b) Why did you come here? _____

15. Over the past three years, has a member of this household gone outside of _____ to find permanent employment? Yes ☐ No ☐

If Yes,

- (a) Why did he (or she) go? (1) _____
(2) _____
- (b) Where did he (or she) go to? (1) _____
(2) _____
- (c) How old was he (or she) at time of leaving household? (1) _____
(2) _____
- (d) What was his (or her) marital status at time of leaving household? (1) _____
(2) _____
- (e) What grade did he (or she) complete in school? (1) _____
(2) _____
- (f) What type of industry did (he or she) go to? (1) _____
(2) _____
- (g) What was his (or her) occupation in his (or her) first job outside ()? (1) _____
(2) _____

Comments:

APPENDIX D

<u>Table No.</u>	<u>Title</u>
45	Seasonal Indexes of Industrial Employment, New Brunswick, 1949 to 1959
46	Seasonal Amplitudes, and Peak and Trough Months in Industrial Employment by Major Industry Groups, New Brunswick, 1949 to 1959
47	Labour Force for Each of the Eleven NES Local Office Areas by Industry, New Brunswick, 1951
48	Percentage Distribution of the Labour Force for Each of the Eleven NES Local Office Areas by Industry, New Brunswick, 1951

Table 45--Seasonal Indexes of Industrial Employment, New Brunswick, 1949 to 1959

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1949	98.1	97.1	95.4	<u>91.7</u>	96.0	104.2	101.6	102.0	102.9	101.4	105.4	104.5
1950	98.6	97.3	96.1	<u>91.6</u>	96.0	103.2	101.3	102.1	103.1	101.7	<u>105.0</u>	104.3
1951	98.9	97.7	96.7	<u>91.7</u>	96.1	101.5	101.4	102.8	103.2	101.9	<u>104.6</u>	103.6
1952	99.0	97.9	96.6	<u>91.7</u>	96.5	100.2	101.8	103.6	103.7	101.9	<u>104.1</u>	103.3
1953	98.7	97.7	95.6	<u>92.1</u>	97.1	99.7	102.6	<u>104.6</u>	103.8	101.9	<u>103.8</u>	102.5
1954	98.5	97.4	94.4	<u>92.0</u>	97.6	100.6	103.3	<u>104.9</u>	104.0	101.9	103.5	101.9
1955	98.3	96.8	93.8	<u>91.7</u>	97.9	101.9	103.9	<u>105.3</u>	104.0	102.3	103.2	100.8
1956	98.2	96.6	93.8	<u>90.9</u>	98.1	103.0	104.4	<u>105.4</u>	104.0	102.3	102.9	100.3
1957	97.8	96.5	94.3	<u>90.5</u>	98.3	103.3	104.9	<u>105.5</u>	104.1	102.2	102.4	100.2
1958	97.4	96.7	94.9	<u>90.3</u>	98.3	103.3	105.1	<u>105.2</u>	104.1	101.9	102.0	100.8
1959	97.1	96.8	95.4	<u>90.3</u>	98.0	103.2	<u>105.1</u>	105.0	104.2	101.7	101.8	101.3

Source: Employment and Payrolls, DBS. "Trough" and "peak" are underlined.

Table 46--Seasonal Amplitudes, and Peak and Trough Months in Industrial Employment
by Major Industry Groups, New Brunswick, 1949 to 1959

	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	Average 1949/59
<u>Forestry (chiefly logging)</u>												
Amplitude.....	98.7	96.6	95.4	94.7	96.2	98.9	101.3	101.9	102.1	102.1	101.4	99.0
Peak month.....	Nov.	Nov.	Nov.	Nov.	Nov.	Nov.	Nov.	Nov.	Nov.	Nov.	Nov.	
Trough month.....	Apr.	Apr.	Apr.	Apr.	Apr.	Apr.	Apr.	Apr.	Apr.	Apr.	Apr.	
<u>Manufacturing</u>												
Amplitude.....	15.6	15.3	15.1	15.1	14.8	14.5	14.1	14.0	14.3	14.0	15.1	14.7
Peak month.....	Aug.	Aug.	Aug.	Aug.	Aug.	Aug.	Aug.	Aug.	July	July	June	
Trough month.....	Dec.	Dec.	Dec.	Dec.	Dec.	Dec.	Dec.	Dec.	Dec.	Feb.	Feb.	
<u>Construction</u>												
Amplitude.....	57.7	57.9	57.5	56.7	54.7	52.6	49.0	46.3	43.4	41.8	41.1	50.8
Peak month.....	Aug.	Aug.	Aug.	Aug.	Aug.	Aug.	Aug.	Aug.	Aug.	July	July	
Trough month.....	Feb.	Feb.	Feb.	Feb.	Feb.	Feb.	Feb.	Mar.	Mar.	Mar.	Feb.	
<u>Transportation, Stor. & Comm.</u>												
Amplitude.....	29.7	29.2	29.0	29.5	30.0	29.6	30.2	30.8	31.9	32.7	33.9	30.6
Peak month.....	Mar.	Mar.	Feb.	Feb.	Feb.	Feb.	Feb.	Feb.	Feb.	Feb.	Feb.	
Trough month.....	May	May	May	June	June	June	Nov.	Nov.	Nov.	Nov.	Nov.	

Table 46--Concluded

	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	Average 1949/59
<u>Trade</u>												
Amplitude.....	16.2	15.9	16.0	15.7	15.1	15.1	14.9	14.6	14.1	13.8	13.7	15.0
Peak month.....	Nov.	Nov.	Dec.	Dec.	Nov.	Nov.	Nov.	Nov.	Nov.	Nov.	Nov.	
Trough month.....	Feb.	Feb.	Feb.	Feb.	Feb.	Feb.	Feb.	Feb.	Feb.	Feb.	Feb.	
<u>Industrial Composite</u>												
Amplitude.....	13.7	13.4	12.9	12.4	12.5	12.9	13.6	14.5	15.0	14.9	14.7	13.7
Peak month.....	Nov.	Nov.	Nov.	Nov.	Aug.	Aug.	Aug.	Aug.	Aug.	Aug.	Aug.	
Trough month.....	Apr.	Apr.	Apr.	Apr.	Apr.	Apr.	Apr.	Apr.	Apr.	Apr.	Apr.	

Source: Employment and Payrolls, DBS. Amplitudes represent the difference between the "peak" and "trough" of the seasonal index.

Table 47--Labour Force for Each of the Eleven NES Local Office Areas by Industry, New Brunswick, 1951

Local Office Areas	All Industries		Agriculture		Forestry		Fishing		Mining		Manufacturing		Public Utilities	
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
Bathurst.....	15,813	100.0	3,585	22.7	2,221	14.0	1,205	7.6	89	0.6	3,136	19.8	57	0.4
Campbellton.....	10,504	100.0	1,369	13.0	1,572	15.0	120	1.1	2	=	2,669	25.4	53	0.5
Edmundston.....	13,282	100.0	3,034	22.8	2,196	16.5	9	0.1	1	=	2,074	15.6	199	1.5
Fredericton.....	14,596	100.0	2,408	16.5	1,672	11.4	25	0.2	257	1.8	2,143	14.7	231	1.6
Minto.....	3,495	100.0	784	22.4	648	18.5	7	0.2	444	12.7	370	10.6	60	1.7
Moncton.....	38,766	100.0	6,228	16.1	2,135	5.5	718	1.9	100	0.3	6,868	17.7	208	0.5
Newcastle.....	13,273	100.0	1,691	12.7	2,415	18.2	753	5.7	18	0.1	2,272	17.2	109	0.8
Saint John.....	31,609	100.0	1,502	4.7	689	2.2	191	0.6	174	0.5	6,109	19.4	378	1.2
St. Stephen.....	10,705	100.0	867	8.1	840	7.8	1,404	13.1	=	=	3,309	30.9	102	1.0
Sussex.....	5,398	100.0	1,576	29.2	551	10.2	7	0.1	107	2.0	699	12.9	49	1.0
Woodstock.....	11,597	100.0	3,790	32.7	1,179	10.2	19	0.2	2	=	1,533	13.2	206	1.8
New Brunswick..	169,038	100.0	26,834	15.9	16,118	9.5	4,458	2.6	1,194	0.7	31,182	18.4	1,652	1.0

Table 48--Percentage Distribution of the Labour Force for Each of the Eleven NES Local Office Areas by Industry, New Brunswick, 1951

Local Office Areas	Primary	Agriculture	Forestry	Fishing	Manufacturing	Other Industries	Total
Bathurst.....	44.3	22.7	14.0	7.6	19.8	35.9	100.0
Woodstock.....	43.1	32.7	10.2	0.2	13.2	43.7	100.0
Minto.....	41.1	22.4	18.5	0.2	10.6	48.3	100.0
Sussex.....	39.5	29.2	10.2	0.1	12.9	47.6	100.0
Edmundston.....	39.4	22.8	16.5	0.1	15.6	45.0	100.0
Newcastle.....	36.6	12.7	18.2	5.7	17.2	46.2	100.0
Campbellton....	29.1	13.0	15.0	1.1	25.4	45.5	100.0
St. Stephen....	29.0	8.1	7.8	13.1	30.9	40.1	100.0
Fredericton....	28.1	16.5	11.4	0.2	14.7	57.2	100.0
Moncton.....	23.5	16.1	5.5	1.9	17.7	58.8	100.0
Saint John.....	7.5	4.7	2.2	0.6	19.4	73.1	100.0
New Brunswick..	28.0	15.9	9.5	2.6	18.4	53.6	100.0

Source: Calculated from data of Census of Canada, 1951, Vols. I and IV.

Table 47--Concluded

Local Office Areas	Construction		Transportation		Trade		Finance		Total Service		Personal Service		Not Stated	
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent	Number	Per Cent
Bathurst.....	656	4.1	594	3.8	1,432	9.0	77	0.5	2,366	15.0	787	5.0	395	2.5
Campbellton....	539	5.2	1,055	10.0	1,039	9.9	99	0.9	1,837	17.6	671	6.4	150	1.4
Edmundston....	724	5.5	1,255	9.4	1,101	8.3	117	0.9	2,352	17.7	904	6.8	220	1.7
Fredericton....	923	6.3	1,327	9.2	1,873	12.8	210	1.4	3,326	22.8	858	5.9	201	1.3
Minto.....	184	5.3	302	8.7	207	5.9	16	0.5	430	12.3	148	4.2	43	1.2
Moncton.....	2,558	6.6	4,822	12.4	6,203	16.0	748	1.9	7,460	19.2	2,253	5.8	718	1.9
Newcastle.....	834	6.3	808	6.1	1,303	9.8	72	0.5	2,785	21.0	703	5.3	213	1.6
Saint John.....	2,053	6.5	4,679	14.8	6,004	19.0	1,019	3.2	7,958	25.2	2,102	6.6	853	2.7
St. Stephen....	672	6.3	632	5.9	1,073	10.0	104	1.0	1,700	15.9	725	6.8	2	-
Sussex.....	349	6.5	394	7.3	587	10.9	97	1.8	920	17.0	296	5.5	62	1.1
Woodstock.....	603	5.2	848	7.3	1,384	11.9	127	1.0	1,793	15.5	621	5.4	113	1.0
New Brunswick..	10,095	6.0	16,716	9.9	22,206	13.0	2,686	1.6	32,927	19.5	10,068	6.0	2,970	1.8

Source: Calculated from data of Census of Canada, 1951, Vols. I and IV.

